MB400 Series

OKI
PRINTING SOLUTIONS

User's Guide

MB460
MB470
MB480

PREFACE

Every effort has been made to ensure that the information in this document is complete, accurate, and up-to-date. The manufacturer assumes no responsibility for the results of errors beyond its control. The manufacturer also cannot guarantee that changes in software and equipment made by other manufacturers and referred to in this guide will not affect the applicability of the information in it. Mention of software products manufactured by other companies does not necessarily constitute endorsement by the manufacturer.

While all reasonable efforts have been made to make this document as accurate and helpful as possible, we make no warranty of any kind, expressed or implied, as to the accuracy or completeness of the information contained herein.

The most up-to-date drivers and manuals are available from:
http://www.okiprintingsolutions.com

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As an Energy Star Program Participant, the manufacturer has determined that this product meets the Energy Star guidelines for energy efficiency.

This product complies with the requirements of the Council Directives 2004/108/EC (EMC), 2006/95/EC (LVD) and 1999/5/EC (R&TTE), as amended where applicable, on the approximation of the laws of the member states relating to electromagnetic compatibility, low voltage and radio & telecommunications terminal equipment.

The following cables were used to evaluate this product to achieve EMC directive 2004/108/EC compliance and configurations other than this may affect that compliance.

CABLE TYPE	LENGTH (METRE)	CORE	SHIELD
Power	1.8	✘	✘
USB	3.0	✘	✔
Parallel	2.0	✘	✔
LAN	2.0	✘	✘
Tel	3.0	✔	✘
Modular	5.0	✘	✘

EMERGENCY FIRST AID

Take care with toner powder:

If swallowed, give small amounts of cold water and seek medical attention. DO NOT attempt to induce vomiting.

If inhaled, move the person to an open area for fresh air. Seek medical attention.

If it gets into the eyes, flush with large amounts of water for at least 15 minutes keeping eyelids open. Seek medical attention.

Spillages should be treated with cold water and soap to help reduce risk of staining skin or clothing.

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NOTES, CAUTIONS AND WARNINGS

NOTE
A note provides additional information to supplement the main text.

CAUTION!

A caution provides additional information which, if ignored, may result in equipment malfunction or damage.

WARNING!

A warning provides additional information which, if ignored, may result in a risk of personal injury.

For the protection of your product, and in order to ensure that you benefit from its full functionality, this model has been designed to operate only with genuine original toner cartridges. Any other toner cartridge may not operate at all, even if it is described as "compatible", and if it does work, your product's performance and print quality may be degraded.

Use of non-genuine products may invalidate your warranty.

Specifications subject to change without notice. All trademarks acknowledged.

ABOUT THIS GUIDE

NOTE
Images used in this manual may include optional features that your product does not have installed.

DOCUMENTATION SUITE

This guide is part of a suite of online and printed documentation provided to help you become familiar with your product and to make the best use of its many powerful features. The documentation is summarised below for reference and is found on the manuals DVD unless indicated otherwise:

> **Installation Safety booklet:** provides information for safe use of your product.

  This is a paper document that is packaged with the product and should be read before setting up your machine.

> **Set-up guide:** describes how to unpack, connect and turn on your product.

  This is a paper document that is packaged with the product.

> **User's Guide:** helps you become familiar with your product and make the best use of its many features. Also included are guidelines for troubleshooting and maintenance to ensure that it performs at its best. Additionally, information is provided for adding optional accessories as your printing needs evolve.

> **Network Guide:** helps you become familiar with the functionality of the built in network interface card.

> **Installation Guides:** accompany consumable items and optional accessories to describe how to install them.

  These are paper documents that are packaged with the consumables and optional accessories.

> **On-line Help:** on-line information accessible from the printer driver and utility software.

ON-LINE USAGE

This guide is intended to be read on screen using an Adobe Reader. Use the navigation and viewing tools provided in Adobe Reader.

There are many cross-references within this book, each highlighted as blue text. When you click on a cross-reference the display will instantly jump to the part of the manual containing the referenced material.

By using the button in Adobe Reader, you can navigate directly back to where you were before.

You can access specific information in two ways:

> In the list of bookmarks down the left hand side of your screen, click on the topic of interest to jump to the required topic. (If the bookmarks are not available, use the "Contents" on page 4.)

> In the list of bookmarks, click on Index to jump to the Index. (If the bookmarks are not available, use the "Contents" on page 4.) Find the term of interest in the alphabetically arranged index and click on the associated page number to jump to the page containing the term.

PRINTING PAGES

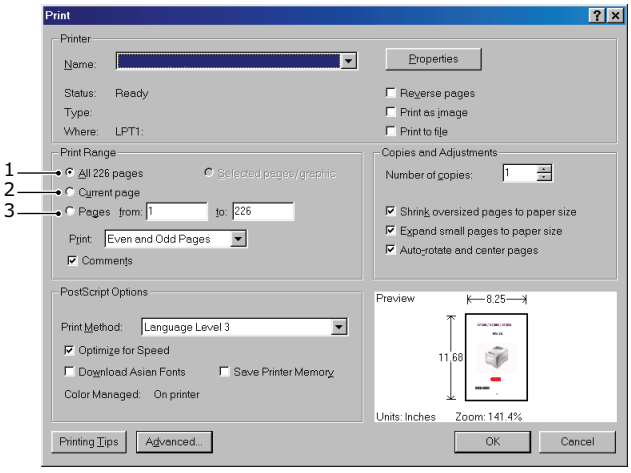
The whole manual, individual pages, or sections may be printed. The procedure is:

1. From the toolbar, select **File > Print** (or press the **Ctrl** + **P** keys).

2. Choose which pages you wish to print:

(a) **All pages**, (1), for the entire manual.

(b) **Current page**, (2), for the page at which you are looking.



(c) **Pages from** and **to**, (3), for the range of pages you specify by entering their page numbers.

(d) Click **OK**.

INTRODUCTION

Congratulations on choosing this Multi Function Product (MFP). It is designed with advanced features, to give you clear and crisp black and white pages at high speed on a range of office print media.

With this MFP, you can instantly scan paper-based documents and deliver the electronic image to various destinations including e-mail addresses, printers, ftp servers, fascimile machines or someone else's computer on the network.

Your MFP includes these features:

- Digital copying - An intutive control panel, makes digital copying fast and easy.
- Up to 21 copies per minute (A4 SEF) and 22 copies per minute (Letter) in black and white for fast and efficient copying.
- Up to 600 x 600dpi (dots per inch) copy resolution.
- Actkey utility (Windows only) - enables the MFP to receive one key touch commands from a locally connected computer (“pull scan”).
- Scan to E-mail - Connected to an Ethernet network and a SMTP server, this MFP allows you to transmit document(s) over the internet via e-mail. With a touch of the e-mail button and the selection of your recipients' e-mail addresses, the document(s) is/are first scanned and converted into an image file, and then transmitted to remote recipients within minutes.
- Scan to Network PC - Allows you to send scanned documents (PDF, TIFF and JPEG file formats) to a server or a personal computer's file folder over an intranet with FTP (File Transfer Protocol), CIFS (Common Internet File System) protocol. The scan to filing feature removes the need for the mail server to handle large attachments.
- Network/PC Printing - When connected to a Network, the MFP is able to perform network or PC printing.
- Multiple Pages Sending - With the Auto Document Feeder (ADF), the MFP allows a stack of up to 50 page document(s) to be continuously scanned.
- Faxing (MB470/MB480) - An intuitive control panel, makes direct faxing fast and easy.
- Advanced fax transmission and reception, including delayed transmissions, sending to multiple locations.
- Address Book/Profiles Managing - This provides a convenient way to manage all the e-mail addresses and profiles (filing destinations).
- The MFP’s setup tool utility allows you to create up to 100 e-mail addresses and several filing destinations to manage your document.
- 600 x 2400dpi (dots per inch) for MB460 and 1200 x 1200dpi for MB470/MB480 print resolution for high quality image production showing the finest detail.
- Automatic two-sided (duplex) printing for economical use of paper and compact printing of larger documents.
- High speed USB 2.0 interface.
- Emulation: standard PCL6, PCL5e and PostScript 3 for MB470/MB480.
- Paper handling: 250 sheets (75g/m2) for MB460/MB470 and 530 sheets (75g/m2) for MB480.
- Template Manager utility for Windows enables the design and print of business cards, banners, labels with ease.
- “Ask Oki” (Windows only) – a user-friendly function that gives a direct link from your printer driver screen (but not always illustrated in this guide) to a dedicated web site

specific to the exact model you are using. This is where you'll find all the advice, assistance and support you could need to help you get the best possible results from your printer.

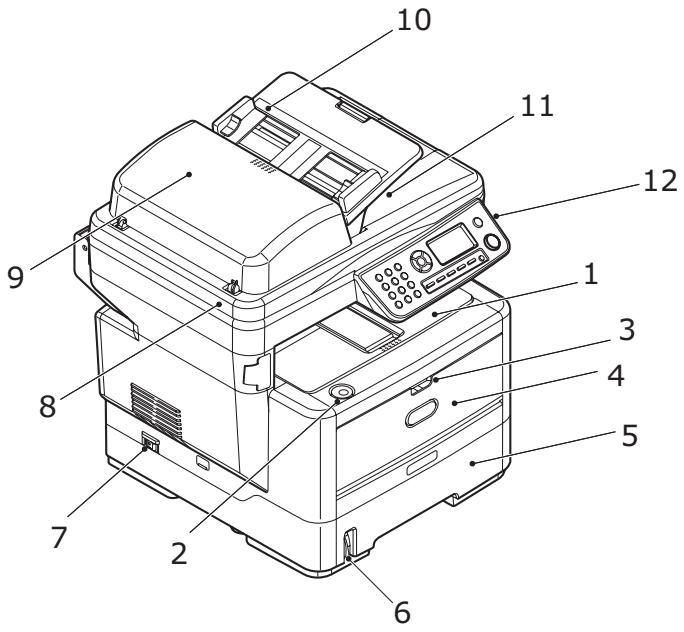
The following optional features are available:

> Additional memory, to allow printing of more complex pages.

> One additional paper tray for loading a further 530 sheets.

MFP OVERVIEW

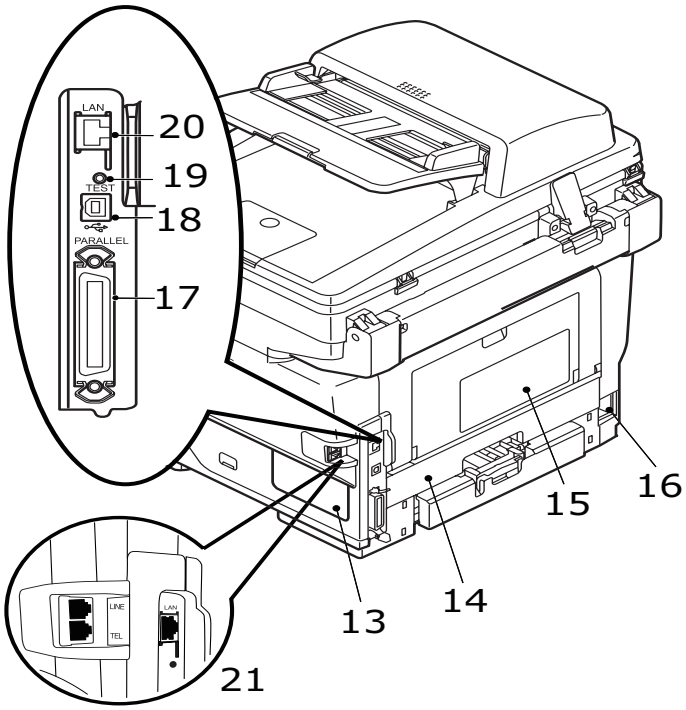
FRONT VIEW



REF.	DESCRIPTION
1.	**Output stacker, face down** Standard printed copy delivery point. Holds up to 150 sheets at 75g/m².
2.	**Top cover release button** Press to open.
3.	**Multi purpose tray release handles** Pull to open.
4.	**Multi purpose tray** Used for feeding heavier paper stocks, envelopes and other special media. MB460: Manual feeding of single sheets. MB470/MB480: Holds up to 50 sheets of 75g/m² paper. Also has an extendable paper support.
5.	**Paper tray** Standard blank paper tray. MB460/MB470: Holds up to 250 sheets of 75g/m² paper. MB480: Holds up to 530 sheets of 75g/m².
6.	**Paper level lever** To visually indicate the paper level in the tray.
7.	**ON/OFF power switch** Refer to "Switching off" on page 17 for details.
8.	**Scanner Bed**
9.	**ADF unit**
10.	**ADF paper tray** Holds up to 50 sheets of A4 size paper at 75g/m².
11.	**Document cover**

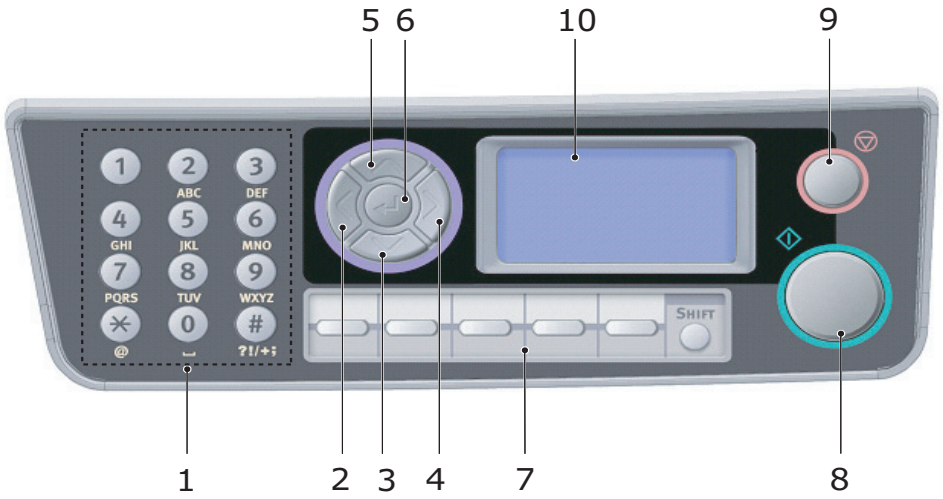
REF.	DESCRIPTION
12.	**Control panel** With LCD and operator buttons. One touch key (shown) is only for MB470/MB480. Refer to "Control panel" on page 14.

REAR VIEW

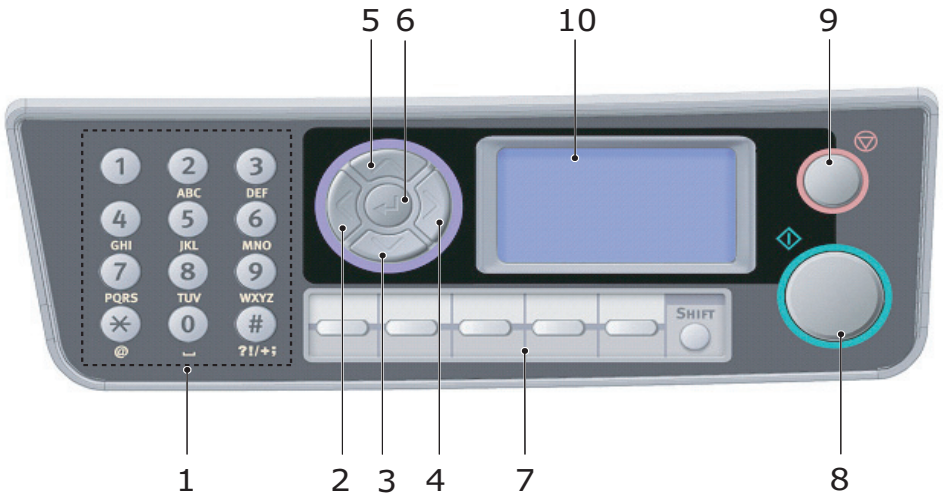


REF.	DESCRIPTION
13.	**Access panel** Allows access to install optional memory.
14.	**Duplex unit** Provides automatic two-sided printing.
15.	**Rear output cover (closed) (face up stacker)** This is mainly used for heavy print media. When used in conjunction with the multi purpose feed tray, the paper path through the MFP is essentially straight. This avoids bending the paper around curves in the paper path.
16.	**AC power socket**
17.	**Parallel connector**
18.	**USB connector**
19.	**Test switch**
20.	**Network connection**
21.	**Line connection (MB470/MB480)** Socket for connecting the machine to the telephone line. **Tel connection (MB470/MB480)** Socket for connecting a telephone handset (if required).

CONTROL PANEL



REF.	DESCRIPTION
1.	**Key Pad** Used to enter numbers, upper-case/lower-case letters and symbols in the Entry Line. Refer to "Character switching" on page 15 for further details.
2.	**Left Key** When in Switching mode: Returns the display to the Function Selection screen or Scan Sub Function Selection screen from the Stand-by screen. When Setting up: Increments the value of the tree structure.
3.	**Down Key** When setting up or in switching mode: Moves the cursor down.
4.	**Right Key** When in Switching mode: > Used to confirm the Mode selected. > Used to start Push scan (if push scan is selected, the executing Push Scan screen is displayed.) When Setting up: > Decrements the value of the tree structure.
5.	**Up Key** When setting up or in Switching mode: Moves the cursor up.
6.	**Enter Key** When in Switching mode: > Used to confirm the Mode selected. > Used to start Push Scan (If Push scan is selected, the Executing Push scan screen is displayed.) When Setting up: > Decrements the value of the tree structure. > Increments the value of the tree structure as the set value is confirmed. When entering Pin ID: Used to confirm the PIN ID entered. Recovery from Error/Warning states.
7.	**One Touch Key (MB470/MB480):** Used to dial numbers from #00 to #09 that are registered as fax numbers. The shift key switches between a group of numbers from #00 to #04 and a group of numbers #05 to #09.



REF.	DESCRIPTION
8.	**Start Button:** > Executes the function selected. > Executes Copy. > Executes Scan to E-mail/Memory/Network PC. > Executes Fax Send (MB470/MB480). > Executes Fax Manual Receive (MB470/MB480). Recovery from Error/Warning states.
9.	**Stop Button:** > Stops the function being executed. > Stops Copy. > Stops Scan to E-mail/Memory/Network PC. > Stops Fax Send (MB470/MB480). > Cancels a Print job.
10.	Liquid Crystal Display (LCD): 128 x 64 dots.

CHARACTER SWITCHING

Numbers, upper and lower case letters and symbols can be entered using the keypad. Press the key multiple times to switch between characters.

NOTE
When pressing multiple times, you must re-press the key within 2 seconds of the previous press.

The example below is based on English being the display language:

KEY	AVAILABLE CHARACTERS
1	1 -> 1
2	a -> b -> c -> A -> B -> C -> 2
3	d -> e -> f -> D -> E -> F -> 3
4	g -> h -> i -> G -> H -> I -> 4
5	j -> k -> l -> J -> K -> L -> 5
6	m -> n -> o -> M -> N -> O -> 6
7	p -> q -> r -> s -> P -> Q -> R -> S -> 7

KEY	AVAILABLE CHARACTERS
8	t -> u -> v -> T -> U -> V -> 8
9	w -> x -> y -> z -> W -> X -> Y -> Z -> 9
0	SP (space) -> 0 -> SP (Space)
*	@ -> * -> a
#	. -> _ -> - -> P -> SP (space) -> + -> ! -> " -> $ -> % -> & -> ' -> (->) -> , -> / -> : -> ; -> < -> = -> > -> ? -> [-> £ ->] -> ^ -> #

CHANGING THE DISPLAY LANGUAGE

The default language used by your MFP for display messages and for report printing is English[1]. If required, this can be changed using the Panel Language Setup utility.

German	Danish
French	Dutch
Italian	Portuguese
Spanish	Polish
Swedish	Czech
Hungarian	Turkish
Norwegian	Russian
Greek	Finnish
Brazilian Portuguese	

NOTE

1. *The above list is not exhaustive or conclusive.*

2. *See the information enclosed with the product (the Panel Language Setup Utility) on the procedure for changing the language.*

1. To ensure your product contains the latest firmware updates, it is recommended that you download the language files from this utility during setup.

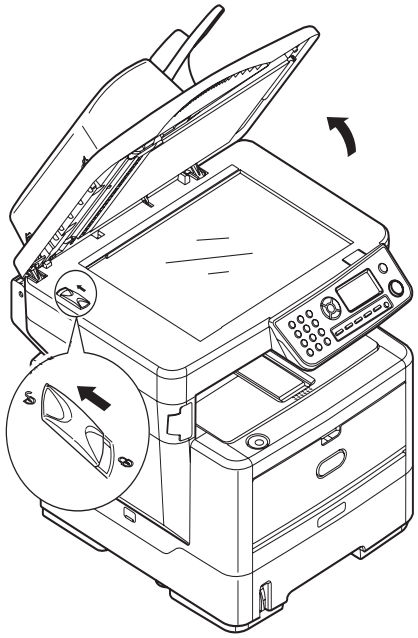
GETTING STARTED

RELEASING THE SCANNER LOCK

CAUTION!

Make sure the scanner is in the UNLOCKED position before operating.

1. Open the document cover.
2. Move scan lock lever to the UNLOCKED position.



POWER SAVING MODE

If you do not use the MFP for a while, the machine will enter the power saving mode to control the power consumption of the device.

SWITCHING OFF

CAUTION!

Do not turn off the power switch suddenly as this may damage your MFP.

1. Press the down arrow button on the control panel to highlight `Menu`, press Enter to select.
2. Press the down arrow button on the Control panel to highlight `System Shutdown`, press Enter to select.
3. Press Enter to execute.
4. At the prompt, turn the power switch OFF.

INSTALLING DRIVERS AND UTILITIES

Your machine is supplied with the following drivers:

- TWAIN driver (only use when connecting to the MFP via USB) (Windows only)
- Printer driver: PCL5e, PCL 6, PostScript3 (MB470/MB480)
- Fax driver (MB470/MB480) (Windows only)

NOTE
You must be logged on as an administrator or a member of the Administrators group in order to complete this procedure. If your computer is connected to a network, network policy settings may also prevent you from completing this procedure.

The installation instructions below refer to USB connection. For network connection details refer to the Network Guide.

If you are running windows Server 2003 or Server 2008, you may need to follow these steps to ensure WIA service starts when using the TWAIN driver and Actkey Utility.

1. Click **Start > Administrative Tools > Services**.
2. Double-click **Services**.
3. Double-click **Windows Image Acquisition (WIA)**.
4. From the Startup type menu, select **Automatic**.
5. Under Service status, click **Start**.
6. Click **OK**.

WINDOWS - TWAIN AND PRINTER DRIVERS

The TWAIN driver is used for "Pull Scanning", i.e. initiating a scan from your computer via software. Compare this to "Push Scanning" where you start the scan by pressing a button on the MFP's front panel. The TWAIN driver only works via USB connections. This means it's not possible to control the scanner over the network from your computer.

There are two different ways of installing the TWAIN and printer drivers:

1. Plugging the printer in first and performing a "Plug and play" type of installation. In this case you must install the TWAIN driver first.
2. Not plugging the printer in yet, but running the Oki driver installer program from the DVD-ROM. This installs the TWAIN (scanner driver) and printer drivers. Once the printer is switched on and plugged in, Windows completes the installation automatically.

NOTE
- *The Oki driver installer program is the recommended installation method.*
- *"Plug and play" installation only applies when connecting to your machine via USB.*

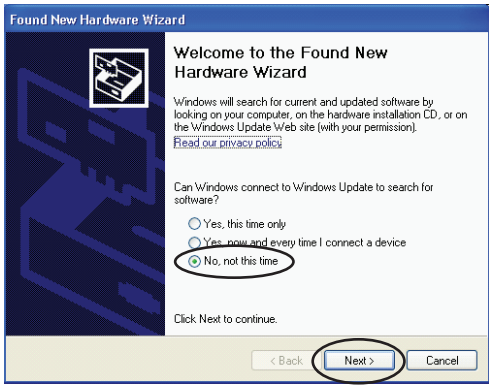
Plug and play installation

The MFP is a "dual device" - Windows sees it as a scanner and a printer. This means when the MFP is plugged into a PC using a USB cable, you'll be prompted to install two different drivers; the TWAIN (scanner) driver first and then the printer driver.

1. Attach the printer to a USB port of your computer.
2. Switch on the Printer.
3. Insert the Drivers & Utilities DVD.

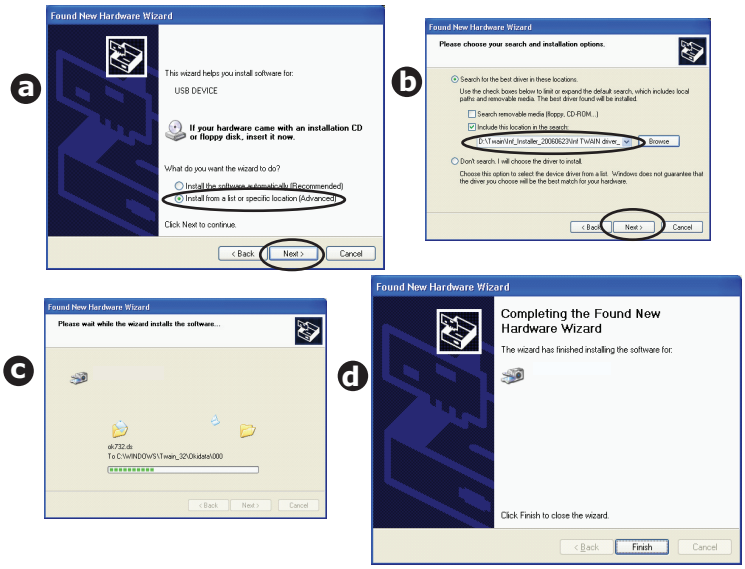
   If the DVD runs automatically, cancel the dialogue.

   The 'New Hardware Found' dialogue will display.

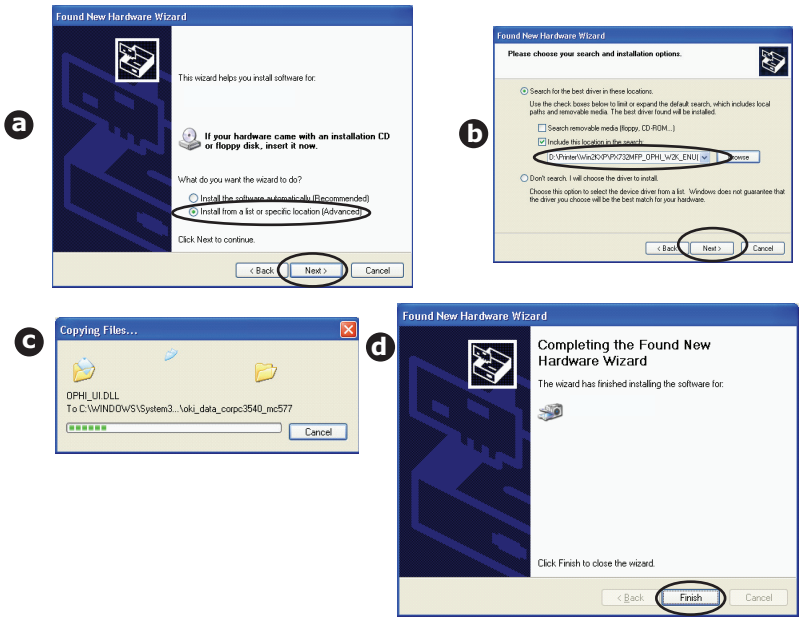

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

   If you do not see the 'New Hardware Found' dialogue, please check that power and USB cables are connected properly, and the printer is switched on.

4. Install TWAIN driver first


a
Found New Hardware Wizard
This wizard helps you install software for:
USB DEVICE
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel
b
Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
Browse
Don't search. I will choose the driver to install.
< Back
Next >
Cancel
c
Found New Hardware Wizard
Please wait while the wizard installs the software...
d
Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
Click Finish to close the wizard.
< Back
Finish
Cancel

5. Next install the Printer driver


a
Found New Hardware Wizard
This wizard helps you install software for:
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel
b
Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
Next >
Cancel
c
Copying Files...
OPHI_UI.DLL
To C:\WINDOWS\System3...\oki_data_corpc3540_mc577
Cancel
d
Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
Click Finish to close the wizard.
< Back
Finish
Cancel

MAC OS X- PRINTER DRIVER

The information in this section is based on Mac OS X Leopard (10.5). Other versions may appear slightly different, but the principles are same.

1. Insert the DVD-ROM and run the Oki driver installer program.

2. Follow the on-screen instructions to install the printer driver.

3. Attach the printer to a USB port of your computer.

4. Switch on the printer.

5. Choose Apple Menu > System Preferences > Print & Fax.

6. If the printer is already in the list of printers, click "-" to remove it.

NOTE
This is necessary as Leopard may not be using the correct Oki printer driver files.

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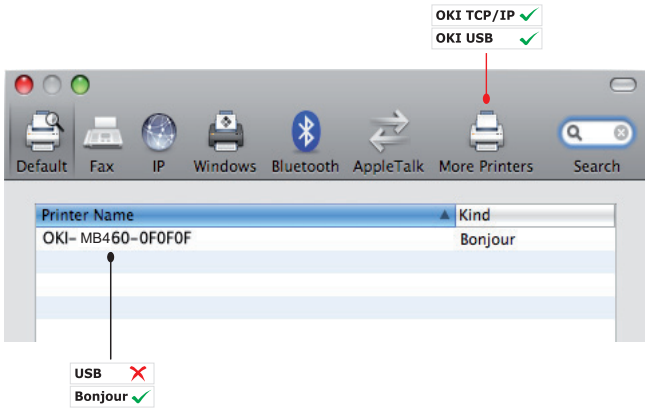
7. Click "+" to add a new printer.

8. Click More Printers.

9. Choose OKI USB from the pop-up menu.



10. Select your printer model and click Add.
11. The printer is added to the list of printers.
12. Restart your computer.

NOTE
Please refer to the readme file on the DVD for details on installing the appropriate Macintosh driver.

MB470/MB480: You can choose PCL or PS driver on the Macintosh Operating System.

FAX DRIVER - WINDOWS ONLY

The fax driver allows you to send faxes directly from your computer without printing the document first. With the fax driver you are sending the fax data from your computer to the MFP, and then the MFP automatically sends the document.

Windows XP has built-in fax support - you can use your computers modem to send faxes directly from your computer.

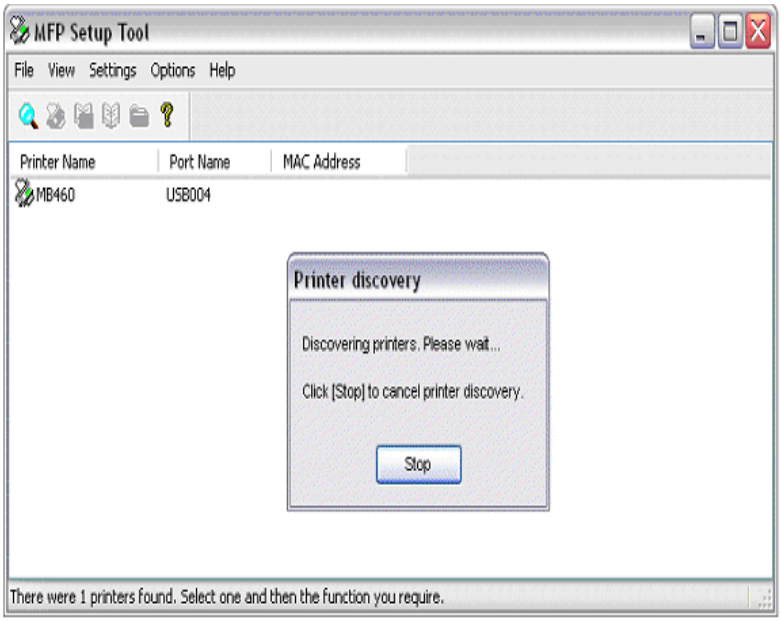
Installing the fax driver

This is installed as part of the Oki driver installer wizard.

MFP SETUP TOOL - WINDOWS ONLY

Installation of the MFP setup utility is optional and can be found on the DVD under the Utilities folder.

The MFP setup tool can discover the MB460/MB470/MB480 devices over USB or network connections. To discover, select **File > Printer Discovery**.



The MFP setup tool allows you to configure your MFP. Refer to "Pre-configuration information" on page 32 for detailed instructions.

ACTKEY UTILITY - WINDOWS ONLY

NOTE
The Actkey utility only works via USB connections.

You must have the TWAIN driver installed.

The Actkey utility enables the MFP to receive one key touch commands from a locally connected computer.

Installation of the Actkey utility is optional and can be found on the Driver/Utilities DVD under the Utilities folder.

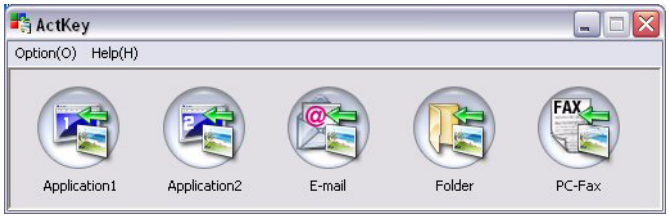
Information on using the Actkey utility can be found in "Scan to PC" on page 65.

Setting up the Actkey utility

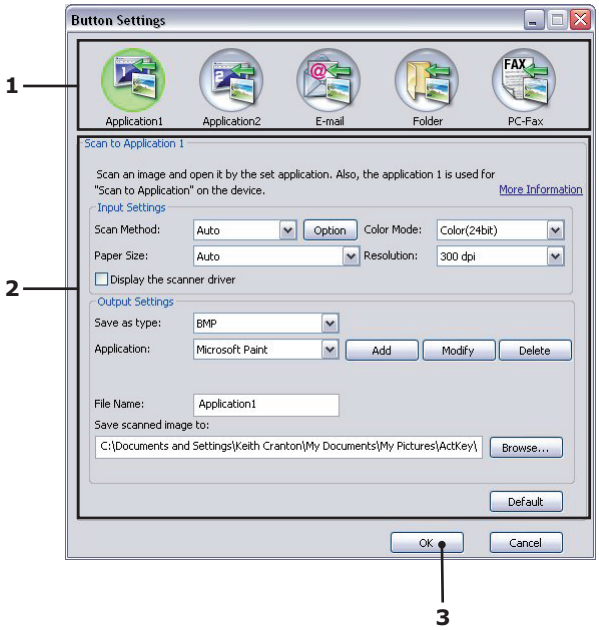
1. Install the Actkey utility from the DVD:

   Set-up will place an "Actkey" icon on your desktop.

2. Double-click this icon to open the Actkey console.



3. Select **Options > Button Settings**. The following screen displays.



4. Select the function you want to set in section (1).
5. Set the parameters for this function in section (2).
6. When you have completed settings, press **OK** (3).

   The Utility will return to the Actkey console.

7. To use Actkey in Local PC mode (i.e. push scanning), it must be set as the program to handle scanner events:

NOTE
The following example uses Windows XP. The steps may vary if you are using any other operating system, but the principle is the same.

(a) Select **Start > Control Panel**.

(b) Double-click **Scanners and Cameras**.

(c) Right-click the MFP icon and click **Properties**.

(d) Select the **Events** tab.

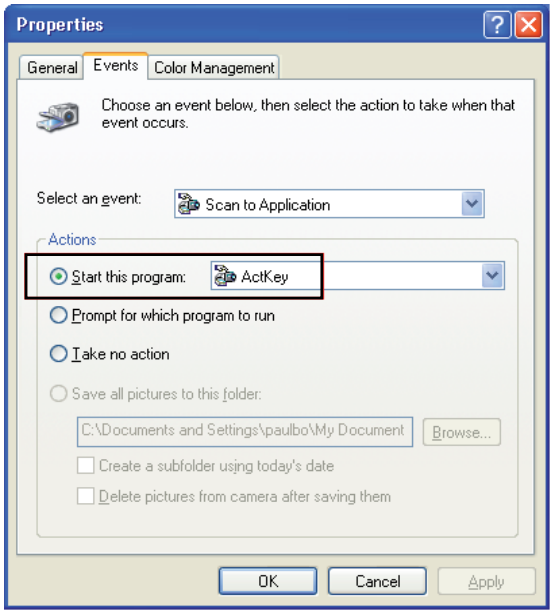
(e) Choose an event from the **Select an event** drop-down menu.

(f) In the Actions field, click **Start this program** and choose **ActKey** from the drop-down menu.

(g) Click **Apply**.

(h) Repeat steps e to g for each event, e.g. Scan to Application, E-mail, Folder and PC-Fax.

(i) Click **OK** to confirm.



PAPER RECOMMENDATIONS

Your MFP will handle a variety of print media, including a range of paper weights and sizes, transparencies and envelopes. This section provides general advice on choice of media, and explains how to use each type.

The best performance will be obtained when using standard 60 - 120g/m² paper designed for use in copiers and laser printers.

Use of heavily embossed or very rough textured paper is not recommended.

Pre-printed stationery can be used, but the ink must not offset when exposed to the high fuser temperatures used in the printing process.

CASSETTE TRAYS

The Cassette Tray can handle paper weights of 60g/m² to 120g/m². The Cassette Tray is ideal for printing A4 documents for more than 1 page in length.

SIZE	DIMENSIONS	WEIGHT (G/M²)
A5	148 x 210mm	Light 60 - 63 g/m2 Medium Light 64 - 74 g/m2 Medium 75 - 89 g/m2 Medium Heavy 90 - 104 g/m2 Heavy 105 - 120 g/m2
B5	182 x 257mm	
Executive	184.2 x 266.7mm	
A4	210 x 297mm	
Letter	216 x 279mm	
Legal 13	216 x 330mm	
Legal 13.5	216 x 343mm	
Legal 14	216 x 356mm	
Statement	139.7 x 215.9mm	

NOTE
The optional second tray can also handle the above paper sizes except for Statement.

If you have identical paper stock loaded in another tray (the optional 2nd or the multi purpose tray) you can have the MFP switch to another tray when the current tray runs out of paper. When printing from Windows applications, this function is enabled in the driver settings. When printing from other systems, this function is enabled in the Printer menu.

MULTI PURPOSE TRAY

The multi purpose tray can handle the same media sizes as the cassette trays but in weights from 60g/m² up to 163g/m². For very heavy paper stock, use the face up (rear cover) paper stacker. This ensures that the paper path through the MFP is almost straight.

Use the multi purpose tray for printing on envelopes and transparencies. Up to 50 sheets of transparencies or 10 envelopes can be loaded at one time, subject to a maximum stacking depth of 10mm for MB470 and MB480 and one sheet at a time for MB460.

SIZE	DIMENSIONS	WEIGHT
A6	105 x 148mm	
A5	148 x 210mm	
A4	210 x 297mm	
B5	182 x 257mm	
Letter	215.9 x 279.4mm	
Executive	184.2 x 266.7mm	
Legal 13	216 x 330mm	Light 60 - 63 g/m^2
Legal 13.5	216 x 343mm	Medium Light 64 - 74 g/m^2
Legal 14	216 x 356mm	Medium 75 - 89 g/m^2
Statement	139.7 x 215.9mm	Medium Heavy 90 - 104 g/m^2
Com-9 Envelope	98.4 x 225.4mm	Heavy 105 - 120 g/m^2
Com-10 Envelope	104.7 x 241.3mm	
Monarch Envelope	98.4 x 190.5mm	
DL Envelope	109.9 x 219.9mm	
C5 Envelope	162 x 229mm	
C6	114 x 162mm	
Custom: Width Length	86 ~ 216 mm 140 ~ 355.6 mm	

NOTE
Label mode must be selected in the printer driver, if you want to print on heavy media which exceeds 120 g/m^2.

Envelopes

CAUTION!

Envelopes should be free from twist, curl or other deformations. They should also be of the rectangular flap type, with glue that remains intact when subjected to hot roll pressure fusing used in this type of printer. Window envelopes are not suitable.

Transparencies

CAUTION!

Do not use transparencies designed for use in colour laser printers and photocopiers.

Recommended type is CG3300 by 3M (A4 or Letter size).

Labels

CAUTION!

Labels should cover entire carrier sheet. The carrier sheet or adhesive must not be exposed to any part of the printer.

FACE DOWN STACKER

The face down stacker on the top of the MFP can hold up to 150 sheets of 64g/m² standard paper and can handle paper stocks up to 120g/m². Pages printed in reading order (page 1 first) will be sorted in reading order (last page on top, facing down).

FACE UP STACKER

For the face up stacker, cover at the rear of the MFP should be opened when required for use. In this condition paper will exit via this path, regardless of driver settings.

Always use this stacker and the multi purpose feeder for heavy paper stocks.

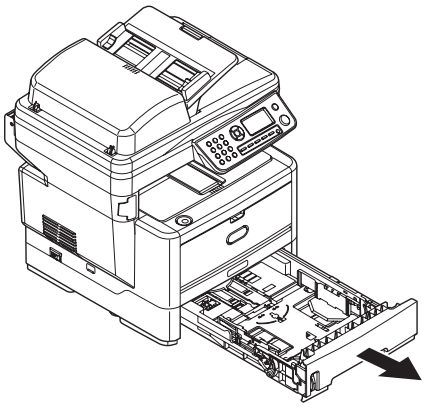
DUPLEX UNIT

The duplex unit provides automatic two-sided printing on the same range of paper sizes as tray 2 (i.e. all cassette sizes except A6), using paper stocks from 75-105g/m².

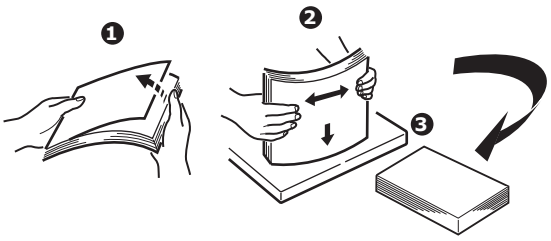
LOADING PAPER

CASSETTE TRAYS

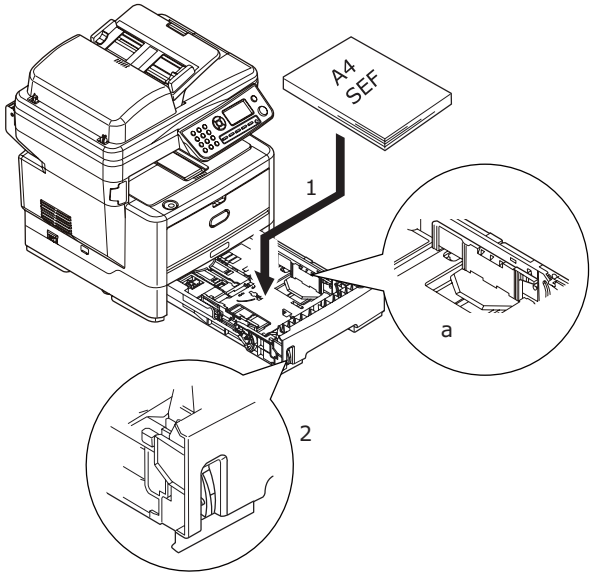
1. Remove the paper tray from the MFP.



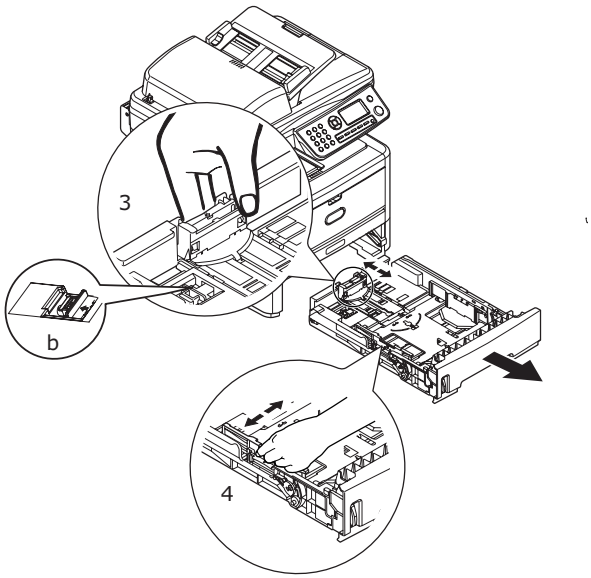
2. Fan the paper to be loaded at the edges (1) and in the middle (2) to ensure that all sheets are properly separated, then tap the edges of the stack on a flat surface to make it flush again (3).



3. Load paper short edge feed (SEF) (1) (for letter headed paper load face down with top edge towards the front of the paper tray) up to mark (a). The paper level indicator (2) provides a visual indication of how much paper is left in the tray.



4. Adjust the rear stopper (3) and paper guides (4) to the size of paper being used. For loading A4 or Legal size paper, push the lever in the arrow direction (b) and extend the paper tray using the rear paper stopper.



5. If required, set the correct media type in the Printer menu. "Tray1 Config" on page 47.

To prevent paper jams:

- Do not leave space between the paper and the guides and rear stopper.
- Do not overfill the paper tray. Capacity depends on the type of paper stock.
- Do not load damaged paper.
- Do not load paper of different sizes or types at the same time.
- Close the paper tray gently.
- Do not pull the paper tray out during printing (except as described below for the 2nd tray).

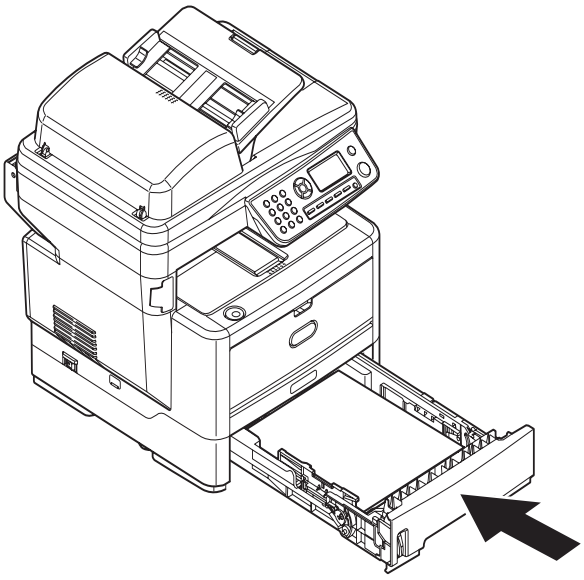
NOTE

- *If you have two trays (optional second tray fitted) and you are printing from the 1st (upper) tray, you can pull out the 2nd (lower) tray during printing to reload it. However, if printing from the 2nd tray, do not pull out the 1st tray. This will cause a paper jam.*
- *For face down printing, make sure the face up (rear cover) stacker is closed (the paper exits from the top of the MFP). Stacking capacity is approximately 150 sheets, depending on paper weight.*
- *For face up printing, make sure the face up (rear cover) stacker is open Always use the face up (rear cover) stacker for heavy paper (card stock, etc.).*

CAUTION!

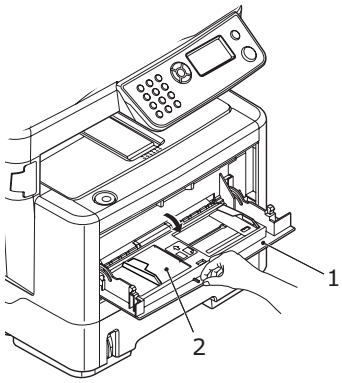
Do not open or close the rear paper exit while printing as it may result in a paper jam.

6. Replace the tray in the MFP.

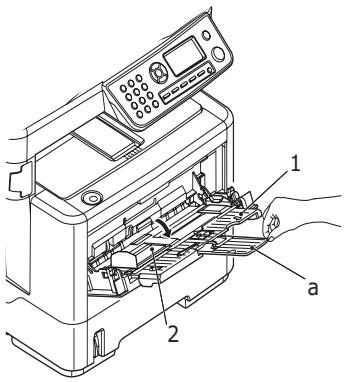


MULTI PURPOSE TRAY

1. Open the multi purpose tray (1).



MB460

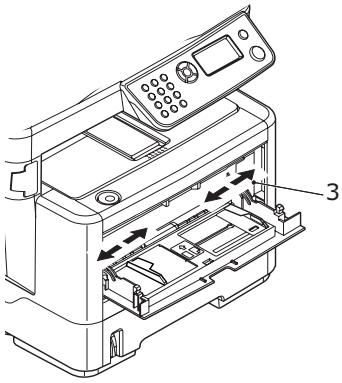


MB470/MB480

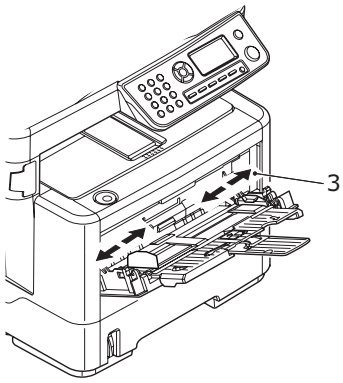
For MB470/MB480: Fold out the paper support (a).

2. Press gently down on the paper platform (2) to ensure it is latched down.

3. Adjust the paper guides (3) to the size of paper being used.



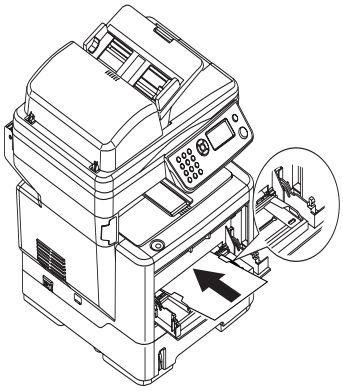
MB460

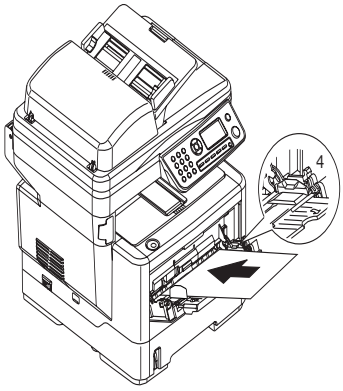


MB470/MB480

For MB460: Load single sheet at a time in to the Multi purpose tray.

For MB470/MB480: Do not exceed the paper capacity of about 50 sheets or 10 envelopes. Maximum stacking depth is 10mm. Press the tray latch button (4) inwards to release the paper platform, so that the paper is lifted and gripped in place.


MB460



MB470/MB480

> For single-sided printing on headed paper load the paper into the multi purpose tray with pre-printed side up and top edge into the MFP.

> For two-sided (duplex) printing on headed paper load the paper with pre-printed side down and the top edge away from the MFP.

> Envelopes should be loaded face up with top edge to the left and short edge into the MFP. Do not select duplex printing on envelopes.

> Load transparencies face up and top edge into the MFP.

4. Set the correct paper size for the multi purpose tray in the Printer menu.

For MB460: see “Manual Feeder Config (MB460)” on page 47.
For MB470/MB480: see “MP Tray Config (MB470/MB480)” on page 47.

CONFIGURING YOUR MACHINE...

MINIMUM CONFIGURATION REQUIREMENTS

To make the best of this MFP, the following configuration is required:

To send faxes (MB470/MB480):

A PSTN telephone line connection.

To send e-mails:

- TCP/IP network.
- A SMTP and an optional POP3 server.
- Default "From" Address (this MFP's Address).

To file document(s) via intranet

- FTP or CIFS Protocol environment.
- Windows 2000, Windows XP, Windows Vista, Mac OS X or FTP server.

PRE-CONFIGURATION INFORMATION

GENERAL

Ensure that you have the relevant permission/PIN numbers before commencing.

The factory set default passwords/PIN are:

Administrator	aaaaaa
PIN	000000
Network (webpage)	aaaaaa

NOTE
The administrator password and PIN should be changed and maintained by the system administrator.

FAX SET UP (MB470/MB480)

Your MFP has to be set up properly to allow faxing from the machine. The following parameters must be set before using the fax function:

- Date and time
- Country code
- Local phone number
- Sender ID

See "Initial set up" on page 50 for details.

NOTE
If you ran the Oki driver installer program from the DVD-ROM you may have already set the time zone, date and time (Windows only) via the Panel Language Setup utility.

NETWORK SET UP

The MFP must also be set up properly on your network to perform scan to e-mail and other functions. In order for other network devices to find the MFP on the network, the following network parameters have to be set.

1. IP Address Set:
2. IP Address:. . .
3. Subnet Mask:. . .
4. Gateway Address:. . .
5. DNS Server:. . .
6. SMTP Server:. . .
7. SMTP Port:25
8. POP3 Server:. . .
9. POP3 Port:110

Explanation:

1. IP Address Set:

   Choose Auto to obtain IP/subnet/gateway addresses automatically from DHCP server. After changing setting from Manual to Auto, the MFP will automatically reboot the network card.

2. IP Address:

   The Internet Protocol (IP) address assigned to your machine by your network administrator.

3. Subnet Mask:

   The net mask address assigned by your network administrator.

4. Gateway Address:

   The gateway IP address assigned by your network administrator.

5. SMTP Server:

   The IP address of your SMTP Mail Server assigned by your network administrator.

6. SMTP Port:

   The port number of your SMTP Mail Server.

7. DNS Server:

   The IP address of DNS Server assigned by your network administrator.

8. POP3 Server:

   The IP address of your POP3 server.

9. POP3 Port:

   The port number of your POP3 Server.

   Enter the DNS name, or IP and port number of your POP3 server if your mail server requires POP3 authentication, before sending e-mails from the machine.

NOTE
You must also set up the "From" details to allow e-mail sending.

NOTE

1. *DHCP server: With DHCP (Dynamic Host Configuration Protocol), a host can automatically be given a unique IP address each time it connects to a network-making IP address management an easier task for network administrators. If the DHCP server is available from your network, you do not need to enter TCP/IP, subnet mask, gateway, and DNS information. Instead, this information will be automatically given for the MFP.*
2. *IP Address: An IP (Internet Protocol) address uniquely identifies a host connection to an IP network. System administrator or network designer assigns the IP address. The IP address consists of two parts, one identifying the network and the one identifying your node. The IP address is usually written as four numbers separated by periods. Each number can be zero to 255. For example, 10.1.30.186 could be an IP address.*
3. *SMTP: (Simple Mail Transfer Protocol) is the main communication protocol used to send and receive e-mail on the Internet.*
4. *DNS: (Domain Name System). The DNS server identifies hosts via names instead of IP addresses. If the DNS server is available on your network, you can enter the domain name instead of digits for your SMTP or POP3 servers, such as Pegasus.com.tw instead of 120.3.2.23.*
5. *POP3: POP3 is the latest Post Office Protocol 3, this is a service that stores and serves e-mails for various client machines that are not connected to the Internet 24 hours a day. E-mails are held in POP3 until you log on.*

INTERNET COMMUNICATION FEATURES

Scan to e-mail

The MFP allows you to deliver your scanned document to e-mail addresses on the network. The document is first scanned and converted to a standard PDF, JPEG or TIFF file format and then transmitted to remote recipients simultaneously as an e-mail attachment.

When you send an e-mail to someone using this MFP it uses Simple Mail Transfer Protocol (SMTP) to transfer your outgoing e-mails to your SMTP mail server, and then send these e-mails to your recipients through the internet.

Setting up an SMTP Server

This section explains setting up a server.

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Admin setup` and press Enter.
3. Using the arrow keys and on-screen keypad, enter the Administrator password. Highlight `Done` and press Enter.
4. Using the Down arrow key, scroll to `Network Menu` and press Enter.
5. Using the Down arrow key, scroll to `Mail Server Setup` and press Enter.
6. Press Enter to select `SMTP server` and press Enter.

7. Enter your IP address.

NOTE
Numbers are entered using the keypad.

When a number is entered from the keypad, the number currently displayed is cleared and the number just entered is displayed as the first digit. When another number is entered, the first number entered moves to the left, and so on.

You can increment/decrement the digits using the UP/Down arrow keys.

---

8. To confirm, press the Enter key.

NOTE
To cancel the IP address, press the Stop key until you exit the menu without saving the changes.

Scan to NetworkPC

Via the intranet with FTP (File Transfer Protocol) or CIFS (Common Internet File System). The MFP allows you to save scanned documents directly to a designated server or a personal computer on the network in a standard PDF, JPEG, or TIFF file format.

CIFS is the sharing system of Microsoft Windows. What is unique about this filing function is that it allows all corporate users to share one machine to send documents to each file folder on a designated server or individual computer.

The following settings or destinations must be defined by the system administrator before the MFP can be used to distribute any scanned document(s) on the network.

> Network and E-mail parameters: Defines the parameters for TCP/IP, SMTP, and POP3 protocols to send your scanned document to e-mail addresses.

> Filing destinations: Defines the protocols and destinations to send your scanned document to FTP servers or any personal computers on the network.

NOTE
1. *If the system administrator has chosen DHCP, then the IP address of TCP/IP, gateway, subnet mask, and DNS server will be automatically given.*

2. *When installing the MFP for the first time, it is recommended that the Administrator retain the default system settings. The settings can be customized at a later date, once you are familiar with the operation and functionality.*

CONFIGURATION

There are a number of configuration options available which allow you to change the scanner, fax (MB470/MB480) and printer settings to suit your own needs. There are three methods of configuring your MFP:

1. From the MFP's web page.

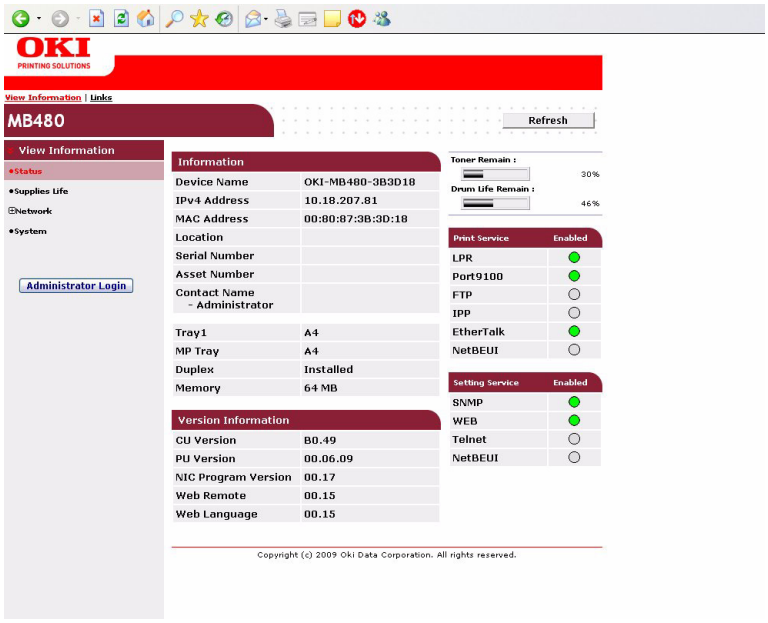
2. From the MFP's Setup Tool utility.

3. From the MFP control panel.

For illustration purposes only, the configuration options shown are as accessed via the control panel.

...FROM THE WEB PAGE

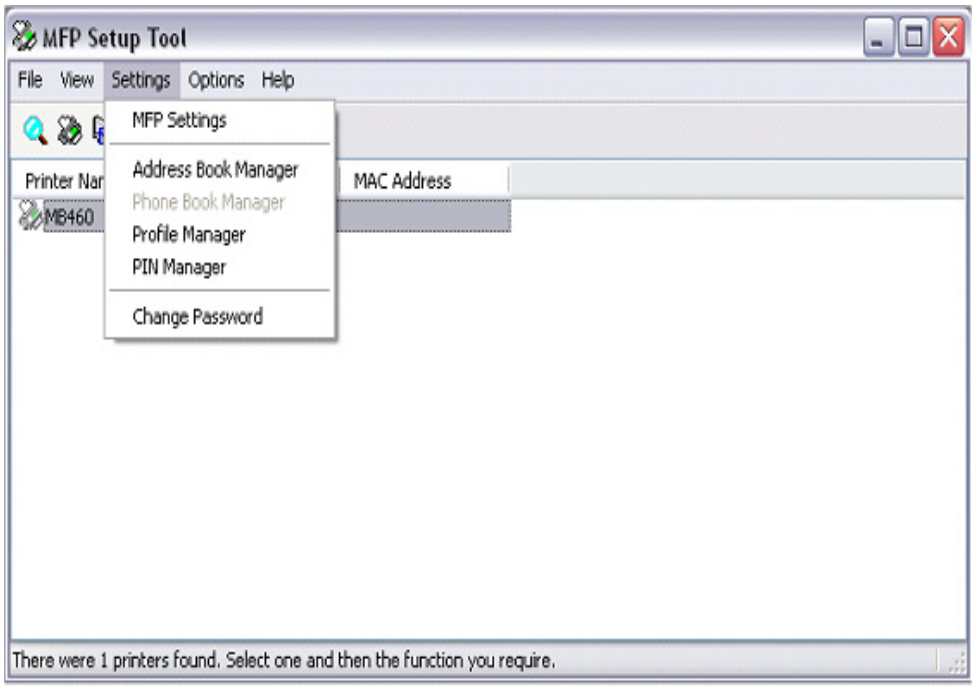
Type the IP address of the MFP in the URL field of your browser and then press Enter. The MFP web page displays. For example: http://10.18.207.81



NOTE
The Administrative Settings are blocked by a password. Refer to "Pre-configuration information" on page 32.

...FROM THE SETUP TOOL

If you have not already done so, install the setup tool as described in "MFP Setup tool - Windows only" on page 21.



NOTE
The Administrative Settings are blocked by a password. Refer to "Pre-configuration information" on page 32.

...FROM THE CONTROL PANEL

1. Press the Down arrow key (1) on the control panel until `Menu` is highlighted, then press Enter (2).
2. Press the Down arrow key (1) until `Admin Setup` is highlighted, then press Enter (2).

NOTE
The Admin Setup option is blocked by a password. Refer to "Pre-configuration information" on page 32.

Copy function

This is the default mode on Power up, with Access Control disabled. Use the Down arrow key to select other functions and Enter to select an option.

Default option (if relevant) is highlighted.

LEVEL 2	DESCRIPTION	OPTIONS
Copies:	Number of copies required (default 1)	**1** to 99
100%	Reduce/Enlarge copy	A4->A5 Leg14->Let Leg13.5->Let Leg13->Let A4->B5 Fit to page **100%** B5->A4 Let->Leg13 Let->Leg13.5 Let->Leg14 A5->A4 Custom
Letter	Paper Supply	Legal13, Legal13.5, Legal14, Letter, **A4**, A5, B5
Mixed	Mode (Resolution)	**Mixed**, Photo, HiRes.Mixed, HiRes.Photo
Density: **0**	Density of print	-3 ~ **0** ~ +3
Tray1	Input Tray:Selects cassette Tray or Manual feeder (MB460), or Multi Purpose Tray (MB470/MB480)	**Tray 1,** Tray2, Manual Feeder, MP Tray
Off	Collate:Sets collate function on or off	On, **Off**
Off	Duplex	On, **Off**
1in1	N-up:Selects how many prints per page	**1in1**, 2in1, 4in1(Hor.), 4in1(Ver.)
E.E:	Edge Erase: This sets the peripheral areas of the document to block out.	**0.00,** 0.25, 0.50, 0.75, 1.00 inch **0**, 6, 13, 19, 25mm
M.S-R:	Margin Shift - Right: This sets the amount to shift the document image to the right.	**0.00,** 0.25, 0.50, 0.75, 1.00 inch **0**, 6, 13, 19, 25mm
M.S-B:	Margin Shift - Bottom: This sets the amount to shift the document down.	**0.00,** 0.25, 0.50, 0.75, 1.00 inch **0**, 6, 13, 19, 25mm
	ID Card Copy	On, **Off**

Scan/scan to function

Use the Down arrow key to select this function and Enter to select option.

E-mail

LEVEL 2	DESCRIPTION	OPTIONS	
Check Address	Displays the default address (set by the administrator).		
Reply to:	Choose Email "Reply to"	Address Book: Screen Entry: Number: LDAP:	 Name Address: Method: OR/AND Search: Address List
Destination	Choose Address from:	Address Book: Screen Entry: Number: LDAP:	 Name Address: Method: OR/AND Search: Address List
Subject	Choose from the default subject list (set by the administrator) or enter a subject.	Subject List Screen Entry	
File Name	A file name should be entered for the scanned images. This file name can be entered in Key Pad Mode. Up to 64 characters can be entered as text, except for the following; \ / : * ? " < > |	N/A	
Density	Select density.	-3, -2, -1, **0**, 1, 2, 3	
Document Size	Select document size.	**A4**, Letter, Legal13, Legal13.5, Legal14	
Color Select	Select Color	Color, **B/W**	
File Format(Color)	Select file format.	PDF, TIFF, JPEG	
File Format(B/W)	Select file format.	PDF, TIFF	

Network PC

NOTE
The MFP must be connected to a Network server to enable Scan to Network PC to be set up.

Profiles can be created and managed using the machine's web page or the MFP Setup Tool.

LEVEL 2	DESCRIPTION	OPTIONS
Profile	If any profiles have been created the list will be displayed. Max 20 profiles can be created.	
Color Select	Select Color	Color, **B/W**

PC

LEVEL 2	DESCRIPTION	OPTIONS
Email	Scan to Email and save file	
Folder	Scan to PC based folder	
Application	Scan to Application1	
Fax (MB470/ MB480)	Scan to Facsimile and save file	

Fax function (MB470/MB480)

LEVEL 2	DESCRIPTION	OPTIONS
Check Dest.	Displays the selected destination fax number.	
Fax No.	Input a destination fax number.	
Phone Book	Select fax number from the phone book.	
Mode	Select the transmission resolution	Standard Fine Extra Fine Photo
Density	Select density by entering a number in the range -3 to +3	-3 ~ **0** ~ +3
Document Size	Select document size	**A4** Letter, Legal13, Legal13.5, Legal14
Delayed Time	Select transmission time	dd/mm/yyyy hh:mm

Menu function

LEVEL 2	ITEM		DESCRIPTION/OPTIONS	
View Information	Supplies Life	Toner (n.nk)	Remaining toner	nnn%
		Drum	Remaining	nnn%
	Network	IPv4 Address	Self explanatory	xxx.xxx.xxx.xxx
		Subnet Mask	Self explanatory	xxx.xxx.xxx.xxx
		Gateway Address	Self explanatory	xxx.xxx.xxx.xxx
		MAC Address	Self explanatory	xx.xx.xx.xx.xx.xx
		NIC Program Version	Self explanatory	xx.xx
		NIC Default Version	Self explanatory	xx.xx
	System	Serial Number	Self explanatory	xxxxxxxxxxxxxxxxxxxxxxxxxx
		Asset Number	Self explanatory	xxxxxxxx
		Lot Number	Self explanatory	xxxxxxxxxxxxxxxxxxxxxxxxxx
		CU Version	Self explanatory	xx.xx
		PU Version	Self explanatory	xx.xx.xx
		Scanner Version	Self explanatory	x.xx.xx
		Fax Version (MB470/ MB480)	Self explanatory	x.xx
		Total Memory	xx MB	
		Flash Memory	xx MB[Fxx]	
Print Information	Configuration	Execute	Prints out a report of the machine's configuration	
	Network Information	Execute	Prints out a report of the Network configuration	
	File List	Execute		
	PCL Font List	Execute		
	PS Font List (MB470/ MB480)	Execute		
	IBM PPR Font List	Execute		
	EPSON FX Font List	Execute		
	Error Log	Execute		
	Demo Page	DEMO1	Execute	Prints a Demonstration page
	MFP Usage Report	Execute	Copies (**1** to 99)	Prints a full report of the machine usage

LEVEL 2	ITEM		DESCRIPTION/OPTIONS	
Print Information cont.	Supplies Status Report	Execute	Prints a report of the status of all consumables	
	Fax Activity Report (MB470/ MB480)	Execute		
	Fax Protocol Dump (MB470/ MB480)	Execute		
	Print System Status	Execute		
Admin Setup	System Setup		Access Control	Enable/**Disable**
			Power Save Time	1/**5**/15/30/60/120 minutes
			Return to Stand-by Time	20/40/**60**/120/180 seconds
			Default Mode	**Copy**/Scan/Fax
			Unit of Measure	inch/**mm**
			Date Format	**mm/dd/yyyy,** dd/mm/yyyy, yyyy/mm/dd
			Report Full Print	On/**Off**
			Panel Contrast	-10~**0**~+10
			Near Life Status	**Enable**/Disable
	Network Menu	Network Setup	TCP/IP	**Enable**/Disable
			IP Version	**IPv4** IPv4 + IPv6 IPv6
			NetBEUI	**Enable**/Disable
			NetBIOS over TCP	**Enable**/Disable
			Ether Talk	**Enable**/Disable
			IP Address Set	**Auto**/Manual
			IPv4 Address	xxx.xxx.xxx.xxx
			Subnet Mask	xxx.xxx.xxx.xxx
			Gateway Address	xxx.xxx.xxx.xxx
			DNS Server Primary	xxx.xxx.xxx.xxx
			DNS Server Secondary	xxx.xxx.xxx.xxx
			WINS Server Primary	xxx.xxx.xxx.xxx
			WINS Server Secondary	xxx.xxx.xxx.xxx
			Web	**Enable**/Disable
			Telnet	**Enable**/Disable
			FTP	**Enable**/Disable

LEVEL 2	ITEM		DESCRIPTION/OPTIONS	
Admin Setup cont.	Network Menu cont.	Network Setup cont.	SNMP	**Enable**/Disable
			Network Scale	Normal/Small
			Hub Link Setting	**Auto Negotiate**/ 100Base-TX Full/ 100Base-TX Half/ 10Base-T Full/ 10Base-T Half
			Factory Defaults	Execute
		Mail Server Setup	SMTP Server	user defined
			SMTP Port	**25**
			SMTP Encryption	None/SMTPS/ STARTTLS
			POP3 Server	user defined
			POP3 Port	**110**
			POP Encryption	None/POP3S/STARTTLS
			Authentication Method	**None**/SMTP/POP
			SMTP User ID	user defined
			SMTP Password	user defined
			POP User ID	user defined
			POP Password	user defined
		LDAP Server Setup	Server Settings	LDAP Server: User defined
				Port Number: 389
				Timeout: 10~**30**~120
				Max. Entries: 2~**100**
				Search Root: User defined
			Attributes	Name1: cn
				Name2: sn
				Name3: givenName
				Mail Address: Mail
				Additional Filter: User defined
			Authentication	Method: **Anonymous**/ Simple/Digest-MD5/ Secure Protocol
			Encryption	**None**/LDAPS/ STARTTLS
		Secure PrtcSrv Setting	Domain	
	Printer Setup	Copies	**1** - 999	
		Duplex	On/**Off**	

LEVEL 2	ITEM		DESCRIPTION/OPTIONS	
Admin Setup cont.	Printer Setup cont.	Media Check	**Enable**/Disable	
		X Dimension	86~**210**~216 millimeter	
		Y Dimension	140~279~297~356 millimeter	
		Resolution	600 dpi/600x1200 dpi/600x2400 dpi/ 1200x1200 dpi (MB470/MB480)	
		Toner Save Mode	**Enable**/Disable	
		Default Orientation	**Potrait**/Landscape	
		Form Length	5~**60**~64~128 lines	
		Edit Size	CassetteSize/Letter/Executive/Statement/ Legal14/Legal 13.5/Legal13/**A4**/A5/A6/B5/ Custom/Com-9 Envelope/Com-10 Envelope/ Monarch Envelope/DL Envelope/C5 Envelope/C6 Envelope	
	Scanner Setup	Email Setup	Add "To" Address	**On**/Off
			Default File Name	User defined
			Subject List	#00 #01 #02 #03 #04
			Default From	User defined
			Separation Limit	1/3/5/10/30 megabytes/**No limit**
			Auto Trans. Report	On/**Off**
	Fax Setup (MB470/ MB480)	Clock Adjustment	dd/mm/yyyy hh:mm	Use Up & Down arrow keys to set and Right arrow key to advance.
		Basic Setup	Service Bit	On/**Off**
			Country Code	Select the country in which the MFP is situated.
			Local Phone No.	<enter>
			Sender ID	<enter>
			MCF(Single Location)	On/**Off**
			MCF(Multi Location)	On/**Off**
			Error MCF	On/**Off**
			Image in MCF	On/**Off**
			H/Modem Rate	33.6 Kbps 28.8 Kbps 14.4 Kbps 9.6 Kbps 4.8 Kbps
			TAD Mode	Type1/Type2/**Type3**
			Tel Priority Mode	On/**Off**

LEVEL 2	ITEM		DESCRIPTION/OPTIONS	
Admin Setup Cont.	Fax Setup (MB470/ MB480) cont.	Basic Setup cont.	CNG Detection	On/**Off**
			T/F Timer Prg.	**20seconds**, 35seconds
			Remote Receive No.	**Off**, 000, 111, 222, 333, 444, 555, 666, 777, 888, 999, ***, ###
			Ring Response	**1 ring**/ 5/10/15/20 seconds
			Speaker Volume	Off/Low/**Middle**/High
			Soft Ringer Volume	Off/Low/Middle/**High**
			DRD Type	Type1/ Type2/ Type3/ Type4
		Fax Line Setup	Redial Tries	0 ~ 10 tries
			Redial Interval	1 ~ 6 minutes
			Dial Tone Detection	On/**Off**
			Busy Tone Detection	**On**/Off
			MF(Tone)/DP(Pulse)	DP/**MF**
	PCL Setup		Font Source	Resident/Resident2/ Downloaded
			Font Number	I0/C1/S1
			Font Pitch	0.44 ~ **10.00** ~ 99.99 CPI
			Symbol Set	Available sets
			A4 Print Width	**78**/80 column
			White Page Skip	On/**Off**
			CR Function	**CR**/CR + LF
			LF Function	**LF**/LF + CR
			Print Margin	**Normal**/1/5 inch/1/6 inch
			Pen Width Adjust	**On**/Off
			Tray ID#: PCL MNID	1 ~ **2** ~ 59
			PCL T0ID	1 ~ **4** ~ 59
			PCL T1ID	**1** ~ 59
	IBM PPR Setup		Character Pitch	**10**/12/17/20 CPI/ Proportional
			Font Condense	12CPI to 20CPI 12CPI to 12CPI
			Character Set	**SET-2**/SET-1
			Symbol Set	Available Sets
			Letter O Style	Enable/**Disable**
			Zero Character	**Normal**/Slashed

LEVEL 2	ITEM		DESCRIPTION/OPTIONS	
Admin Setup Cont.	IBM PPR Setup cont.		Line Pitch	**6 LPI**/ 8 LPI
			White Page Skip	On/**Off**
			CR Function	**CR**/CR + LF
			LF Function	**LF**/LF + CR
			Line Length	**80**/136 column
			Form Length	**11**/11.7/12 inch
			TOF Position	**0.0** ~ 0.1 ~ 1.0 inch
			Left Margin	**0.0** ~ 0.1 ~ 1.0 inch
			Fit to Letter	**Enable**/Disable
			Text Height	**Same**/Diff
	EPSON FX Setup		Character Pitch	**10**/12/17/20CPI/ Proportional
			Character Set	**SET-2/**SET-1
			Symbol Set	Available sets
			Letter O Style	Enable/**Disable**
			Zero Character	**Normal**/Slashed
			Line Pitch	**6 LPI**/8 LPI
			White Page Skip	On/**Off**
			CR Function	**CR**/CR + LF
			Line Length	**80**/136 column
			Form Length	**11**/11.7/12 inch
			TOF Position	**0.0** ~ 0.1 ~ 1.0 inch
			Left Margin	**0.0** ~ 0.1 ~ 1.0 inch
			Fit to Letter	**Enable**/Disable
			Text Height	**Same**/Diff
	PS Setup (MB470/MB480)		L1 Tray	TYPE1/TYPE2
			Parallel Protocol	ASCII/RAW
			USB Protocol	ASCII/RAW
			Network Protocol	ASCII/RAW
	Memory Setup		Receive buffer size	**Auto**/0.1/0.2/0.5/1/2/ 4 MB
			Resource Save (MB470/MB480)	Auto/Off/0.1/0.2/0.5/ 1/2/4 MB
	Change Password		Select “New password” and enter	
			Verify Password	
	Settings		Save Settings	Execute
			Reset Settings	Execute
Printer Menu	Tray Configuration	Manual feed (MB460)	**On**/Off	

LEVEL 2	ITEM		DESCRIPTION/OPTIONS	
Printer Menu Cont.	Tray Configuration cont.	Paper Feed	**Tray1**/Tray2/MP Tray	
		Auto Tray Switch	**On**/Off	
		Tray Sequence	**Down**/Up/Paper Feed Tray	
		MP Tray Usage (MB470/ MB480)	When Mismatching/Do not use	
		Tray1 Config	Paper Size	**A4**/A5/B5/Legal14/ Legal13.5/Legal13/ Letter/Executive/ Statement/Custom
			Media Type	**Plain**/Letterhead/ Bond/Recycled/ Cardstock/Rough
			Media Weight	Light/Medium Light/ Medium/ Medium Heavy/ Heavy
		Tray2 Config	Paper Size	**A4**/A5/B5/Legal14/ Legal13.5/Legal13/ Letter/Executive/ Custom
			Media Type	**Plain**/Letterhead/ Bond/Recycled/ Cardstock/Rough
			Media Weight	Light/Medium Light/ Medium/ Medium Heavy/ Heavy
		MP Tray Config (MB470/ MB480)	Paper Size	**A4**/A5/A6/B5/Legal14/ Legal 13.5/Legal13/ Letter/ Executive/ Statement/Custom/ Com-9 Envelope/Com-10 Envelope/Monarch Envelope/DL Envelope/ C5 Envelope/C6
			Media Type	**Plain**/Letterhead/ Transparency/Labels/ Bond/Recycled/Card Stock/Rough
			Media Weight	Light/Medium Light/ **Medium**/ Medium Heavy/ Heavy
		Manual Feeder Config (MB460)	Paper Size	**A4**/A5/A6/B5/Legal14/ Legal13.5/Legal13/ Letter/Executive/ Statement/Custom/ Com-9 Envelope/Com-10 Envelope/Monarch Envelope/DL Envelope/ C5 Envelope/C6 Envelope
			Media Type	**Plain**/Letterhead/ Transparency/Labels/ Bond/Recycled/Card Stock/Rough

LEVEL 2	ITEM		DESCRIPTION/OPTIONS	
Printer Menu Cont.	Tray Config cont.	Manual Feeder Config (MB460) cont.	Media Weight	Light/Medium Light/ **Medium**/ Medium Heavy/ Heavy
	Printer Adjust	Manual Timeout	Off/30/**60**/120/180/240/300 secs.	
		Low Toner	**Continue**/Stop	
		Jam Recovery	**On**/Off	
		Error Report	On/**Off**	
		Start Up	On/**Off**	
		Paper Black Setting	-2 ~ **0** ~ +2	
		Auto Continue	On/**Off**	
		Timeout in Job	Off/5/10/20/30/**40**/50/60/90/120/150/180/ 210/240/270/300 seconds	
		Timeout Local	0/**5**~40~290/295/300 seconds	
		Timeout Net	0/5~**90**~290/295/300 seconds	
		Personality	Auto/PCL/IBM PPR/EPSON FX/ PS3 EMULATION(MB470/MB480)	
		Hex Dump	Execute	
		Darkness	-2 ~ **0** ~ +2	
		Cleaning	Execute	
		X Adjust	-2.00 ~ **0.00** ~ +2.00 millimeter	
		Y Adjust	-2.00 ~ **0.00** ~ +2.00 millimeter	
		Duplex X Adjust	-2.00 ~ **0.00** ~ +2.00 millimeter	
		Duplex Y Adjust	-2.00 ~ **0.00** ~ +2.00 millimeter	
		Place Page	**Center**/Left	
Copy Menu	Job Build Scanning		On/**Off**	
	Copies		**1**-99	
	Reduce/Enlarge		A4>A5 / Leg14>Let / Leg13.5>Let / Leg13>Let / A4>B5 / Fit to Page / **100%** / B5>A4 / Let>Leg13 / Let>Leg13.5 / Let>Leg14 /A5>A4	
	Mode		**Mixed** / Photo / HiRes.Mixed / HiRes.Photo	
	Density		-3/-2/-1/**0**/+1/+2/+3	
	Input Tray		**Tray1**/Tray2/Manual Feeder (MB460)/MP Tray(MB470/MB480)	
	Collate		On/**Off**	
	Duplex		On/**Off**	
	N-up		**1in1**/2in1/4in1(Hor.)/4in1(Ver.)	
	Edge Erase		**0.00**/0.25/0.50/0.75/1.00 inch **0**/6/13/19/25mm	
	Margin Shift Right		**0.00**/0.25/0.50/0.75/1.00 inch **0**/6/13/19/25mm	

LEVEL 2	ITEM		DESCRIPTION/OPTIONS	
Copy Menu cont.	Margin Shift Bottom		**0.00**/0.25/0.50/0.75/1.00 inch **0**/6/13/19/25mm	
Scanner Menu	Scan to Email	Job Build Scanning	On/**Off**	
		Density	-3/-2/-1/**0**/+1/+2/+3	
		Document size	**A4**/Letter/Legal13/Legal13.5/Legal14	
		Color Select	Color/**B/W**	
		Color Format	File Format	**PDF**/TIFF/JPEG
			Compression Rate	**Low**/Medium/High
		Color Format cont.	Resolution	100/**150**/200/300 dpi
		B/W Format	Grayscale	On/**Off**
			File Format	**PDF**/TIFF
			Compression Rate	G3/**G4**/Raw
			Resolution	100/150/**200**/300/ 400/600 dpi
	Address Book		Email Address	**#00** to #99
			Group Address	**G00** to G19
	Scan to Network PC		Color Select	Color/**B/W**
Fax Menu (MB470/ MB480)	Auto Receive		Fax Manual Tel/Fax TAD DRD	
	Mode		**Standard**/Fine/Extra Fine/Photo	
	Density		-3/-2/-1/**0**/+1/+2/+3	
	Document Size		**A4**/Letter/Legal13/Legal13.5/Legal14	
	Phone Book		Speed Dial/One touch dial	#00 to #99
			Group Dial	G00 to G09
System Shutdown	Shutdown Start		Execute	

SETTING THE FAX FACILITY

INITIAL SET UP

The following parameters must be set before using the fax function on your MFP:

- Date and time
- Country code
- Local Phone No.
- Sender ID

There are other parameters that can be adjusted to suit your personal preferences later if required, refer to fax set up table for details (See "Advanced set up" on page 51.).

To set fax parameters:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Admin Setup` and press Enter.
3. Using the arrow keys and on-screen keypad, enter the Administrator password. Highlight `Done` and press Enter.
4. Using the Down arrow key, scroll to `Fax Setup` and press Enter.
5. Press Enter to select the `Clock Adjustment` menu.
6. Using the arrow keys and keypad, enter the time and date.

NOTE
Use the Right and Left arrow keys to move between digits.

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7. Press Enter to confirm.
8. Using the Down arrow key, scroll to `Basic Setup` and press Enter.
9. Using the Down arrow key, scroll to `Country Code` and press Enter.
10. Using the arrow keys, scroll to the country in which the MFP is situated and press Enter to confirm.
11. Using the Down arrow key, scroll to `Local Phone No.` and press Enter
12. Using the keypad or arrow keys, type in the local phone number press Enter to confirm.
13. Using the Down arrow key, scroll to `Sender ID` and press Enter.
14. Using the keypad or arrow keys and the on-screen keypad, type in the sender ID.
15. Highlight `Done` and press Enter.
16. Press the Left arrow key to exit the menu.

NOTE
If required, set the dialling method for your region (Pulse or Tone). Refer to "MF(Tone)/DP(Pulse)" on page 45.

If connecting the machine through a private branch exchange (PBX) line, you must also specify a dial prefix to allow the machine to obtain an external line before dialling. Refer to "Connecting to a PBX" on page 52.

ADVANCED SET UP

Your machine offers a multitude of features which reduce the time required for manual operation and make fax communications more efficient.

Adding a speed dial entry to the phone book

The machine can hold up to 100 speed dial numbers in the phone book. To assign a speed dial number to the phone book:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Fax Menu` and press Enter.
3. Using the Down arrow key, scroll to `Phone Book` and press Enter.
4. Press Enter to select `Speed Dial/One Touch Dial`.
5. Using the arrow keys, scroll to the required speed dial entry position and press Enter.
6. Press Enter to select Fax.No.
7. Using the keypad, type in the destination fax number and press Enter.

NOTE
If the destination fax number has an "extension number", press the "$" button three times to insert a pause (-) between numbers. The machine will enter a pause when dialling. See " Character switching" on page

The maximum length of a number is 32 digits.

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8. Press Enter to select Name.
9. Using the keypad or arrow keys and the onscreen keypad, type in the name.

NOTE
The maximum length of a name is 16 characters.

---

10. Highlight Done and press Enter.
11. Using the Down arrow key, scroll to `Done` and press Enter to confirm and add your entry to the phone book.
12. Press the Left arrow key to exit the menu.

Adding a group entry to the phone book

The machine can hold up to 10 group dial settings.

To add a new group dial number to the phone book:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Fax Menu` and press Enter.
3. Using the Down arrow key, scroll to `Phone Book` and press Enter.
4. Using the Down arrow key, scroll to `Group Dial` and press Enter.
5. Using the arrow keys, scroll to the required group dial entry position and press Enter.
6. Press Enter to select `Speed Dial List`.
7. Scroll through the list of speed dial entries and press Enter to mark (*). When all required entries are selected, press the Left arrow key.
8. Press Enter to select `Group Name`.

9. Using the keypad or arrows and the on-screen keypad, type in the name.

NOTE
The maximum length of a name is 16 characters.

---

10. Highlight `Done` and press Enter.
11. Using the Down arrow key, scroll to `Done` and press Enter to confirm and add your entry to the phonebook.
12. Press the Left arrow key to exit the menu.

Deleting a speed dial entry from the phone book

To delete a speed dial entry from the phone book:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Fax Menu` and press Enter.
3. Using the Down arrow key, scroll to `Phone Book` and press Enter.
4. Press Enter to select `Speed Dial List/One Touch Dial`.
5. Using the arrow keys, scroll to the required speed dial and press Enter.
6. Using the Down arrow key, scroll to `Clear` and press Enter.
7. Using the Up arrow key, scroll to `Yes` and press Enter.
8. Press the Left arrow key to exit the menu.

Deleting a group dial entry from the phone book

To delete a group dial entry from the phone book:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Fax Menu` and press Enter.
3. Using the Down arrow key, scroll to `Phone Book` and press Enter.
4. Using the Down arrow key, scroll to `Group Dial` and press Enter.
5. Using the arrow keys, scroll to the required group dial and press Enter.
6. Using the Down arrow key, scroll to `Clear` and press Enter.
7. Using the Up arrow key, scroll to `Yes` and press Enter.
8. Press the Left arrow key to exit the menu.

Connecting to a PBX

Private Branch Exchanges (PBXs) are private telephone systems used to route calls internally, for example, in a company. When dialling a telephone number, if a prefix is required to open an outside line, the line is connected to a PBX. If this MFP is going to be connected to a PBX, press the # key three times to insert a "-", then type in the destination fax number. This will ensure the MFP waits until an outside line is available before dialling the rest of the number.

Automatic redial

You can set the fax to automatically redial if the initial fax transmission fails. The machine will redial on:

- Line busy
- No answer
- Communication error

To set auto-redial:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Admin Setup` and press Enter.
3. Using the arrow keys and on-screen keypad, enter the Administrator password. Highlight `Done` and press Enter.
4. Using the Down arrow key, scroll to `Fax Setup` and press Enter.
5. Using the Down arrow key, scroll to `Fax Line Setup` and press Enter.
6. Press Enter to select the `Redial Tries`.
7. Using the arrow keys, select the required number of redial attempts (between 0 and 10), then press Enter to confirm.
8. Using the Down arrow key, scroll to `Redial Interval` and press Enter.
9. Using the arrow keys, select the required redial interval (between 1 and 6 minutes), then press Enter to confirm.
10. Press the Left arrow key to exit the menu.

Reception Mode

You can change the way your MFP handles incoming fax transmissions and telephone calls (if you have a telephone handset connected) depending on your office requirements. Choose from:

- Fax
- Manual
- Tel/Fax
- TAD
- DRD

To change the reception mode:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Fax Menu` and press Enter.
3. Press Enter to select `Auto Receive`.
4. Using the arrow keys, select the required reception mode and press Enter.
5. Press the Left arrow key to exit the menu.

Adding a telephone handset

If you want to add a telephone handset to your MFP, connect the line to the Tel socket (in certain countries it may be necessary to use a telephone plug adaptor).

You will also need to update the telephone settings to set the ring response:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Admin Setup` and press Enter.
3. Using the arrow keys and on-screen keypad, enter the Administrator password. Highlight `Done` and press Enter.
4. Using the Down arrow key, scroll to `Fax Setup` and press Enter.
5. Using the Down arrow key, scroll to `Basic Setup` and press Enter.
6. Using the Down arrow key, scroll to `Ring Response` and press Enter.
7. Using the arrow keys, select the required response setting (between 1 ring and 20 seconds) and press Enter.
8. Press the Left arrow key to exit the menu.

NOTE
You must also set the reception mode to the appropriate setting. See *"Reception Mode" on page 53.*

NOTE
If the telephone handset is in use (off hook), dialling for speech purposes is not available using the MFP keypad or speed dial keys.

MANAGING THE ADDRESS BOOK

The following section describes how to add/remove/modify e-mail addresses to/from the Address Book.

ADDING AN EMAIL ADDRESS ENTRY TO THE ADDRESS BOOK

The machine can hold up to 100 e-mail addresses in the address book. To assign a new email address to the address book:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Scanner Menu` and press Enter.
3. Using the Down arrow key, scroll to `Address Book` and press Enter.
4. Press Enter to select Email Address.
5. Using the arrow keys, scroll to the required email address entry position and press Enter.
6. Press Enter to select Address.
7. Using the keypad or arrows keys and the on-screen keypad, type in the new email address.

NOTE
The maximum length of address is 80 characters.

---

8. Highlight `Done` and press Enter.
9. Press Enter to select Name.

10. Using the keypad or arrows keys and the on-screen keypad, type in the name.

NOTE
The maximum length of name is 16 characters.

If you do not enter a name, this column remains blank.

---

11. Highlight `Done` and press Enter.

12. Using the Down arrow key, scroll to `Done` and press Enter to confirm and add your entry to the address book.

13. Press the Left arrow key to exit the menu.

DELETING AN EMAIL ADDRESS ENTRY FROM THE ADDRESS BOOK

To delete an email address entry from the address book:

1. Using the Down arrow key, scroll to `Menu` and press Enter.

2. Using the Down arrow key, scroll to `Scanner Menu` and press Enter.

3. Using the Down arrow key, scroll to `Address Book` and press Enter.

4. Press Enter to select Email Address.

5. Using the arrow keys, scroll to the required email address and press Enter.

6. Using the Down arrow key, scroll to `Clear` and press Enter.

7. Using the Up arrow key, scroll to `Yes` and press Enter.

8. Press the Left arrow key to exit the menu.

MODIFYING AN EMAIL ADDRESS ENTRY FROM THE ADDRESS BOOK

To edit an email address entry from the address book:

1. Using the Down arrow key, scroll to `Menu` and press Enter.

2. Using the Down arrow key, scroll to `Scanner Menu` and press Enter.

3. Using the Down arrow key, scroll to `Address Book` and press Enter.

4. Press Enter to select Email Address.

5. Using the arrow keys, scroll to the required email address and press Enter.

6. If required, press Enter to select Address. Update the details:

(a) Using the keypad or arrow keys and on-screen keypad, edit the email address.

(b) Highlight `Done` and press Enter.

7. If required, use the Down arrow key to scroll to `Name` and press Enter. Update the details:

(a) Using the keypad or arrow keys and on-screen keypad, edit the email name.

(b) Highlight `Done` and press Enter.

8. Using the Down arrow key, scroll to `Done` and press Enter.

9. Press the Left arrow key to exit the menu.

ADDING A GROUP ENTRY TO THE ADDRESS BOOK

The machine can hold up to 20 group addresses. To add a new group address to the address book:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Scanner Menu` and press Enter.
3. Using the Down arrow key, scroll to `Address Book` and press Enter.
4. Using the Down arrow key, scroll to `Group Address` and press Enter.
5. Using the arrow keys, scroll to the required group address entry position and press Enter.
6. Press Enter to select Address List.
7. Scroll through the list of email address entries and press Enter to mark (*). When all required entries are selected, press the Left arrow key.
8. Press Enter to select `Group Name`.
9. Using the keypad or arrows keys and the on-screen keypad, type in the name.

NOTE
The maximum length of a name is 16 characters.

If you do not enter a Group name, Group name column remains blank.

---

10. Highlight `Done` and press Enter.
11. Using the Down arrow key, scroll to `Done` and press Enter to confirm and add your entry to the address book.
12. Press the Left arrow key to exit the menu.

DELETING A GROUP ADDRESS ENTRY FROM THE ADDRESS BOOK

To delete a group address entry from the address book:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Scanner Menu` and press Enter.
3. Using the Down arrow key, scroll to `Address Book` and press Enter.
4. Using the Down arrow key, scroll to `Group Address` and press Enter.
5. Using the arrow keys, scroll to the required group address and press Enter.
6. Using the Down arrow key, scroll to `Clear` and press Enter.
7. Using the Up arrow key, scroll to `Yes` and press Enter.
8. Press the Left arrow key to exit the menu.

MODIFYING A GROUP ADDRESS ENTRY FROM THE ADDRESS BOOK

To edit a group address entry from the address book:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Scanner Menu` and press Enter.
3. Using the Down arrow key, scroll to `Address Book` and press Enter.
4. Using the Down arrow key, scroll to `Group Address` and press Enter.
5. Using the arrow keys, scroll to the required group address and press Enter.
6. If required, press Enter to select Address List. Update the details:

(a) Using the arrow keys, scroll through the list and modify as required. Press Enter to remove any address from the group listing; the "*" will be removed from the address.

(b) Press the Left arrow key to exit the list.

7. If required, use the Down arrow key to scroll to `Group Name` and press Enter. Update the details:

(a) Using the keypad or arrow keys and on-screen keypad, edit the email name.

(b) Highlight `Done` and press Enter.

8. Using the Down arrow key, scroll to `Done` and press Enter.

9. Press the Left arrow key to exit the menu.

ACCESS CONTROL

The operation and functionality of this machine can be limited to authorised personnel only by the simple introduction of a 4-9 digit PIN (Personal Identification Number). This is known as Access Control. The greater the number of digits in the PIN - the more secure it is.

Your MFP supports the following PIN types:

> Administrator PIN; This is the PIN for the system administrator(s).

  If a PIN is registered as an administrator, the Admin password entry screen is displayed, and when an Admin password is entered, it will be authenticated as an administrator.

> User PIN; This is PIN for general users.

  If a PIN is registered as a general user, the function selection screen is displayed, also after PIN entry, the function selection screen is displayed.

After using the machine, you will be expected to log out. Leaving the machine in access control mode will render the machine not usable by unauthorised users.

ENABLING ACCESS CONTROL

Access Control Enable/Disable is switched in **Menu > Admin Setup > System Setup > Access Control**.

If your administrator has enabled access control on your machine, it will automatically start up in access control mode. You will not be able to use it until you have provided valid login information.

With Access Control set to enable, the display reverts to the System Setup screen immediately following the setting change. If one of the functions such as Print, Fax Send or PC Scan is running, the display will only revert to the System Setup screen when the task has been completed.

LOGGING IN

1. If the `Enter PIN` screen is displayed, use the keypad to enter your PIN.
2. Press Enter (or the Start button) to confirm.

NOTE
A valid PIN consists of 4 to 9 digits.

Numbers entered are not displayed on-screen, they are replaced by "".*

If the PIN entered in invalid, "Incorrect Password" is dispalyed for 3 seconds and the display reverts to the Enter the PIN screen.

---

3. At the `Enter Password` screen, use the on-screen keypad to enter your password.
4. Use the Up arrow key to highlight `Done` and press Enter to confirm.

LOGGING OUT

When you have finished using the machine, make sure you log out:

NOTE
With Access Control enabled, Logout options are displayed in the Menu on the Mode Selection screen.

---

1. Using the Down arrow key, highlight `Logout` and then press Enter.

   The Confirm Logout screen is displayed.

2. Using the Down arrow key, highlight `Yes` and then press Enter to confirm.

   The display reverts to the Enter PIN screen.

NOTE
When the MFP control panel is left inactive for a prescribed length of time, the display automatically reverts to the Enter PIN screen if Access Control is enabled.

OPERATION TIME-OUT

When the MFP control panel is left inactive for a prescribed length of time (Operation Time-out), the display automatically reverts to the idle screen if Access Control is disabled.

If an error state occurs, Operation Time-out is disabled.

After Operation Time-out, the display automatically reverts to the Enter PIN screen if Access Control is enabled.

The length of the Operation Time-out depends on the setting in **Menu Mode > Admin Setup > System Setup > Return to Standby Time**.

OPERATION

With its intuitive control panel, this Multi Function Product (MFP) is designed to be easy to use.

NOTE
If Access Control has been enabled, you will first have to enter your Password/ PIN.

The following sections describe how to copy, fax (MB470/MB480), and scan your documents.

LOADING DOCUMENT(S)

NOTE
The fax function is available only for MB470/MB480.

This MFP can scan/copy/send/fax document(s) either in the ADF (Automatic Document Feeder) or on the glass. If you need to send multiple pages, load your papers in the ADF. The ADF can hold up to 50 pages at one time.

If you need to scan/copy/send/fax pages from books, newspaper clippings, or paper with wrinkles or curls, place them on the glass.

PLACING DOCUMENT(S) IN THE ADF

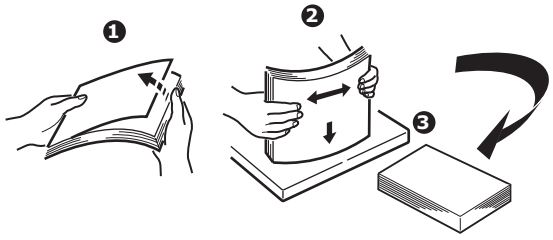
Before using the ADF, please make sure that your paper meets the following specifications:

- Document(s) can range in size from 5.8” x 8.2” (148mm x 210mm) - 8.5” x 14”(216mm - 355.6mm)
- Document(s) can range in weight from 16 to 28 lbs (60 - 105 g/m2) and 11mm sheet thickness.
- Document(s) should be square or rectangular and in good condition (not fragile or worn).
- Document(s) should be free of curl, wrinkle, tears, wet ink, or punch holes.
- Document(s) should be free of staples, paper clips, paper sticky notes.
- Keep the glass clean and without any documents left on it.

NOTE
- *Glossy paper should not be used on the ADF.*
- *You cannot scan A6 document in the ADF.*
- *To transmit irregular types of document(s), place the document(s) on the glass or make a copy first and then transmit the copy instead.*

---

1. If you have multiple pages, fan the pages to avoid paper jams. The ADF holds up to 50 pages at one time.



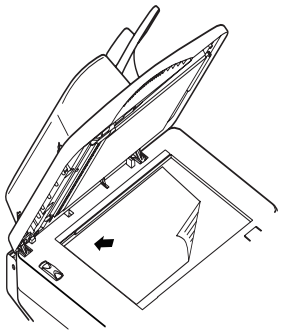
2. Place the document with the text face UP in the ADF and make sure that the top of each page is fed in first.

3. Adjust the Paper Guides (1) to centre the document in the ADF.

PLACING DOCUMENT(S) ON THE GLASS

1. Open the document cover.

2. Place your document with the text face DOWN on the glass and align the top of the page to the upper-left corner.



3. Close the document cover.

COPYING

NOTE
Factory default setting is Copy mode.

BASIC OPERATION

1. Place your document(s) with text face Up in the ADF or face Down on the glass.
2. Set your copying options as required. For further details refer to the following sections.
3. Then press the Start button.

NOTE
When using the ADF, in order to prevent paper jams, if you wish to cancel the copy process, press the Stop button once to stop the process and a second time to eject the paper.

ADVANCED OPERATION

Using the options available, you can alter the copy output to suit your needs:

1. Press Enter button.
2. Select required parameter with Down arrow key and press Enter.
3. Pressing Up and Down arrow keys, select value and press Enter.

   Options are (factory default settings in bold text):

MENU ITEM	OPTIONS
Copies	**1** - 99
Reduce/Enlarge	A4>A5, Leg14>Let, Leg13.5>Let, Leg13>Let, A4>B5, Fit to page, **100%**, B5>A4, Let>Leg13, Let>Leg13.5, Let>Leg14, A5>A4, Custom
Paper Supply	Legal13, Legal13.5, Legal14, Letter, **A4**, A5, B5
Mode	**Mixed**, Photo, HiRes.Mixed, HiRes.Photo
Density	-3, -2, -1, **0**, +1, +2, +3
Input Tray	**Tray1**, Tray2(optional), Manual Feeder(MB460), MP Tray(MB470/MB480)
Collate	On, **Off**
Duplex	On, **Off**
N-up	**1in1**, 2in1, 4in1(Hor.), 4in1(Ver.)[a]
Edge_Erase	**0.00** inch, 0.25 inch, 0.50 inch, 0.75 inch, 1.00 inch or 0 mm, 6 mm, 13 mm, 19 mm, 25 mm[b]
M_SHIFT_R	**0.00** inch, 0.25 inch, 0.50 inch, 0.75 inch, 1.00 inch or 0 mm, 6 mm, 13 mm, 19 mm, 25 mm[c]
M_SHIFT_B	0.00 inch, 0.25 inch, 0.50 inch, 0.75 inch, 1.00 inch or 0 mm, 6 mm, 13 mm, 19 mm, 25 mm[d]

MENU ITEM	OPTIONS
Id Card Copy	On, **Off**

a. N-up can only be changed from 1in1 if paper size is set to A4 or Letter and documents are scanned from the ADF. Collate always defaults to "Off". Reduce/Enlarge to "100%". Reduce/enlarge to "100%," Edge erase to "0mm (0.00in)" and Margin shift -Right/Bottom to "0mm (0.00in)".

b. The setting displayed, mm or inch, depends on the setting in Admin Setup - System Setup - Unit of Measure in Menu Mode. If Edge Erase is set to other than "0 mm" or "0.00 in," Reduce/Enlarge always defaults to "100%", N-up to "1in1", and Margin Shift - Right/Bottom to "0 mm (0.00 in)".

c. Any parts of the image that do not fit on the paper as a result of this setting, are not printed. The setting displayed mm or inch, depends on the setting in Admin Setup - System Setup - Unit of Measure in Menu Mode. If Edge Erase is set to other than "0 mm" or "0.00 in," Reduce/Enlarge always defaults to "100%", N-up to "1in1", and Margin Shift - Right/Bottom to "0 mm (0.00 in)".

d. Any parts of the image that do not fit on the paper as a result of this setting, are not printed. The setting displayed mm or inch, depends on the setting in Admin Setup - System Setup - Unit of Measure in Menu Mode. If Edge Erase is set to other than "0 mm" or "0.00 in," Reduce/Enlarge always defaults to "100%", N-up to "1in1", and Margin Shift - Right/Bottom to "0 mm (0.00 in)".

4. Press the Left arrow key to return to the start menu.

SCANNING

BASIC OPERATION

1. Place your document(s) with the text face up in the ADF or face Down on the glass.
2. Select Scan mode using the Down arrow button on the control panel.
3. Press Enter.
4. Press the Down arrow key and select the scan destination from the following options:

   > Email

   > Network PC

   > PC
5. Set your scanning options as required. For further details refer to the following sections.
6. Then press the Start button.

NOTE
When using the ADF, in order to prevent paper jams, if you wish to cancel the copy process, press the Stop/Cancel button once to stop the process and a second time to eject the paper.

SCAN TO EMAIL

1. Place your document(s) with text face Up in the ADF or face Down on the glass.
2. Using the Down arrow key, scroll to `Scan` and press Enter.
3. Press Enter to select `Email`.
4. Using the Up arrow key, scroll to `Reply To` and press Enter.
5. Set the reply address from either:

   > `Address Book` - select from the address book entries

   > `Screen Entry` - enter directly using the keypad

   > `Number` - enter an address or group address number

   > `LDAP` - select from a Lightweight Directory Access Protocol (LDAP) server

   If prompted, select `More` and change address, otherwise select `Done`.
6. Using the Down arrow key, scroll to `Destination` and press Enter.
7. Set the destination address(s) from either:

   > `Address Book` - select from the address book entries

   > `Screen Entry` - enter directly using the keypad

   > `Number` - enter an address or group address number

   > `LDAP` - select from a Lightweight Directory Access Protocol (LDAP) server

   If prompted, select `More` and add additional addresses, otherwise select `Done`.
8. Using the Down arrow key, scroll to Subject and press Enter.
9. Set the subject from either:

   > `Subject List`

   > `Screen Entry`

10. Using the Down arrow key, scroll to `File Name` and press Enter.
11. Using the keypad or arrow keys and the on-screen keypad, type in the file name.
12. Highlight `Done` and press Enter.
13. If required, adjust the density setting:
    (a) Using the Down arrow key, scroll to `Density` and press Enter.
    (b) Highlight the required setting and press Enter.
14. If required, adjust the document size:
    (a) Using the Down arrow key, scroll to `*A4` and press Enter.
    (b) Highlight the required setting and press Enter.
15. If required, adjust the file format:

> If you are sending a colour file;

    (i) Using the Down arrow key, scroll to `Color Select (Color)` and press Enter.
    (ii) Highlight the required setting and press Enter.

> If you are sending a black and white file;

    (i) Using the Down arrow key, scroll to `Color Select (B/W)` and press Enter.
    (ii) Highlight the required setting and press Enter.

SCAN TO NETWORK PC

Before sending your document to a file server, profiles should be setup first to speed up the process. A profile contains a list of filing parameters such as your filing protocol, directory, file name and other scanning parameters. Add a new profile by either entering the machine's web page or installing and starting the Network Setup Tool on the DVD-ROM supplied.

NOTE
You can create up to 20 profiles.

---

1. Place your document(s) with text face Up in the ADF or face Down on the glass.
2. Using the Down arrow key, scroll to `Scan` and press Enter.
3. Using the Down arrow key, scroll to `Network PC` and press Enter.
4. The file server profile list is displayed. If no profiles exist, the profile list is blank.
5. Using the arrow keys, scroll to the required profile (filing destination) and press Enter.
6. Press the Start button.

SCAN TO PC

NOTE
Ensure that the Actkey Utility is installed and set up first. Refer to "Actkey utility - Windows only" on page 22.

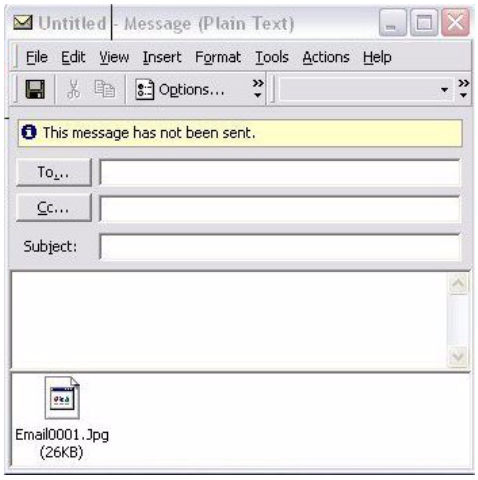
The scanner function can be controlled from either the MFP (Push Scan) or from the PC (Pull Scan).

Push Scan

1. Place your document(s) with text face Up in the ADF or face Down on the glass.
2. Using the Down arrow key, scroll to `Scan` and press Enter.
3. Using the Down arrow key, scroll to `PC` and press Enter.
4. The Push Scan screen displays four options. Using the arrow keys, scroll to the required function and press Enter:

   (a) Email

   When the Email function is selected, the ActKey Utility executes PC scan in accordance with your settings for "Scan to Email". The scanned image data is saved in the specified folder and is ready for the software to send as an attachment. Complete the data on screen and send.



   (b) Folder

   When the Folder function is selected the Actkey Utility executes PC scan in accordance with your settings for "Scan to Folder". The scanned image data is saved in the specified folder.

   (c) Application

   When the Application function is selected the Actkey Utility executes PC scan in accordance with your settings for "Scan to Application1". The scanned image data is saved in the application specified by the Actkey Utility.

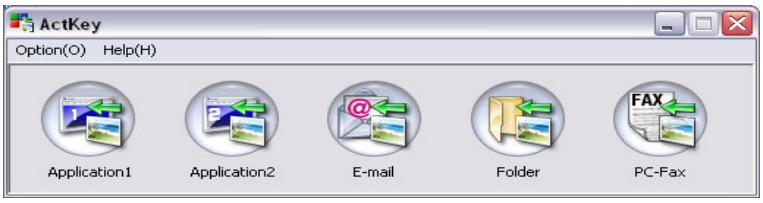
   (d) Fax (MB470/MB480)

   When the Fax function is selected, the Actkey Utility executes PC scan in accordance with your settings for Scan to PCFax. The scanned image data is saved in the specified folder and is ready for the software to send as an attachment. Complete the data on screen and send.

5. Press the Start button.

Pull Scan

Double click the Actkey Icon on your desktop. The Actkey console (below) will display.



The functions below, can now be controlled from the PC:

- Scan to Application1
- Scan to Application2
- Scan to Email
- Scan to Folder
- Scan to Fax (MB470/MB480)

Scan to "Application2" works exactly the same as scan to Application1, simply allowing an alternative application to be selected.

As the cursor passes over an icon, the parameters set for that icon appear in a text box, a single click will select that option.

FAXING(MB470/MB480)

BASIC OPERATION

Searching the phone book

To search the contents of the phone book, you can either:

> Use the arrow keys to scroll through the list and highlight the required entry.

NOTE
Lists of Speed Dials and Group Dials that have been added to the Phone Book are displayed in the order Group Dial (G00~ G09) and Speed Dial/One Touch Dial (#00~#99).

> Using the keypad to type in a search character, for example the first letters of the name. Destinations whose initial character matches the entered character appears on the screen.

NOTE
You can switch between numbers, upper-case/lower-case letters, and symbols by pressing the same key multiple times. When pressing multiple times, you must re-press the key within 2 seconds of the previous press.

Refer to Character switching see "Character switching" on page 15.

Sending a Fax

1. Place your document(s) with text face Up in the ADF or face Down on the glass.
2. Using the Down arrow key, scroll to `Fax` and press Enter.
3. Enter the destination fax number by either:

   (a) Selecting Fax No. and typing in the number using the numeric keypad.

NOTE
You can type in a destination number in full or type in a speed dial or group dial number:

To enter a speed dial; press the "#" key and then enter the two-digit speed dial number, for example "#29".

To enter a group dial; press the "" key and then enter the one-digit group dial number, for example "*3".*

Fax number and ID registered in the selected dial number are displayed.

   (i) Press Enter.

   (ii) At the continue prompt, select `More` to add additional numbers or `Done` to confirm.

   (b) Selecting Phone Book and selecting the number from the phone book entries.

   (i) Search the phone book entries, refer to "Searching the phone book" on page 68.

   (ii) Repeat until all required entries are selected.

   (iii) Press the Left arrow key to exit the list.

4. If required, press the Up arrow key and scroll to `Check Dest.` to view /edit the list of fax numbers:
   > Press Enter to remove any entry from the list (no longer displays * next to the entry).
   > Press the Left arrow key to exit the list.
5. Press the Start button to send your document(s).

NOTE
If you wish to cancel faxing, press Stop to abort the operation.

Fax transmissions are sent in black and white only.

ADVANCED OPERATION

Changing the Fax Quality (Mode)

The machine is preset to "Standard". If required, you can select Fine, ExtraFine, or Photo to improve fax quality.

To change fax quality:

1. Follow "Sending a Fax" process steps 1 to 4.
2. Using the Down arrow key, scroll to `Standard` and press Enter.
3. Using the Down arrow key, scroll to the required quality setting and press Enter.
4. Press the Start button to send your document(s).

NOTE
After you have completed your fax operation, the machine will automatically return to the preset value.

Adjusting Density

The machine is preset to the "Normal" level of Density. If your original document comes with a lighter or darker contrast, you can improve the quality by adjusting the density setting.

To change density:

1. Follow "Sending a Fax" process steps 1 to 4.
2. Using the Down arrow key, scroll to `Density:0` and press Enter.
3. Using the Down arrow key, scroll to the required density setting and press Enter.
4. Press the Start button to send your document(s).

NOTE
After you have completed your fax operation, the machine will automatically return to the preset value.

Document Size

The machine is preset to "A4" size.

To change the document size:

1. Follow "Sending a Fax" process steps 1 to 4.
2. Using the Down arrow key, scroll to `A4` and press Enter.

3. Using the Down arrow key, scroll to the required document size and press Enter.
4. Press the Start button to send your document(s).

NOTE
After you have completed your fax operation, the machine will automatically return to the preset value.

Fax Receiving

Your MFP is set to receive faxes automatically, if you wish to change the reception mode, refer to "Reception Mode" on page 53 for details.

Automatic fax receive (default mode)

When the MFP is in automatic fax receive mode:

- When ringing - Receiving start is displayed on Screen.
- While it is receiving a Fax - Fax Receiving, sender's Fax. No., and the number of pages are displayed until the reception of data from all pages is complete.
- Upon completion of Fax Receiving - Sender's Fax no., the total number of received pages and Receiving OK are displayed for 3 seconds, and the display changes to the Mode Selection screen.
- When the machine is printing Fixed images, the screen displays are the same as those for printing.

NOTE
Cancelling is disabled while the machine is receiving a fax.

If fax receiving fails, an error message displays until you press the Stop button:

- If an error occurs while a fax is being received, fax communication-related errors are displayed.
- If an error occurs while a fax is printing, error messages displayed are the same as those in print mode.

Manual Receive

Upon receiving an incoming call, the MFP will ring until you press the Start button to receive the fax.

Refer to "Reception Mode" on page 53 for details on enabling manual receive mode.

Tel/Fax automatic switching

Telephone/Fax Mode (T/F): When incoming calls are a mixture of fax and telephone calls, your best choice is the Telephone/Fax Mode. In this mode, the machine detects whether the incoming call is a fax or voice call.

When the call is from another Fax machine, your machine will switch to fax mode and receive the message. When the call is a voice call, your machine will ring like a telephone. If you do not answer, your machine will switch back to fax mode to allow the calling party to manually send a fax.

Refer to "Reception Mode" on page 53 for details on enabling Tel/Fax mode.

TAD interface

Telephone Answering Device Mode (TAD): Use this mode if you want the machine and telephone answering machine to share the same phone line. Like Telephone/fax mode, the TAD mode detects whether an incoming call is fax or voice call. Refer to "Adding a telephone handset" on page 54 for more information.

To set up TAD mode:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Admin Setup` and press Enter.
3. Using the arrow keys and on-screen keypad, enter the Administrator password. Highlight `Done` and press Enter.
4. Using the Down arrow key, scroll to `Fax Setup` and press Enter.
5. Using the Down arrow key, scroll to `Basic Setup` and press Enter.
6. Using the Down arrow key, scroll to `TAD Mode` and press Enter.
7. Select the appropriate setting; `Type1, Type2, Type3`.
8. Press the Left arrow key to exit the menu.

Refer to "Reception Mode" on page 53 for details on enabling TAD mode.

DRD interface

Distinctive Ring Detection Mode (DRD): This mode is programmed for the fax to answer only on a distinctive ring. You can have a single phone line to have two numbers with distinct rings, one for regular phone calls and one for fax. If the phone line is in use, and there is an incoming fax, the sender will receive a busy signal.

To set up DRD mode:

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Admin Setup` and press Enter.
3. Using the arrow keys and on-screen keypad, enter the Administrator password. Highlight `Done` and press Enter.
4. Using the Down arrow key, scroll to `Fax Setup` and press Enter.
5. Using the Down arrow key, scroll to `Basic Setup` and press Enter.
6. Using the Down arrow key, scroll to `DRD Type` and press Enter.
7. Select the appropriate setting; `Type1, Type2, Type3, Type4`.
8. Press the Left arrow key to exit the menu.

Refer to "Reception Mode" on page 53 for details on enabling DRD mode.

Remote receiving

If you have an external telephone handset connected to your fax machine, you can instruct your fax machine to begin receiving by entering a three-digit code on your telephone keypad. This feature is useful when you answer a call on the external phone, but need to switch the line over to your fax machine.

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Admin Setup` and press Enter.
3. Using the arrow keys and on-screen keypad, enter the Administrator password. Highlight `Done` and press Enter.
4. Using the Down arrow key, scroll to `Fax Setup` and press Enter.

5. Using the Down arrow key, scroll to `Basic Setup` and press Enter.
6. Using the Down arrow key, scroll to `Remote Receive No.` and press Enter.
7. Select the appropriate setting; `Off, 000, 111, 222, 333, 444, 555, 666, 777, 888, 999, ***, ###`.
8. Press the Left arrow key to exit the menu.

Refer to "Remote Receive No." on page 45.

PRINTING A FAX ACTIVITY REPORT

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Admin Setup` and press Enter.
3. Using the arrow keys and on-screen keypad, enter the Administrator password. Highlight `Done` and press Enter.
4. Press Enter to select `System Setup`.
5. Using the Down arrow key, scroll to `Report Full Print` and press Enter.
6. Using the Up arrow key, scroll to `On` and press Enter.
7. Press the Left arrow key twice to exit the menu.
8. Using the arrow keys, scroll to `Print Information` and press Enter.
9. Using the Down arrow key, scroll to `Fax Activity Report` and press Enter.
10. Press Enter to execute.

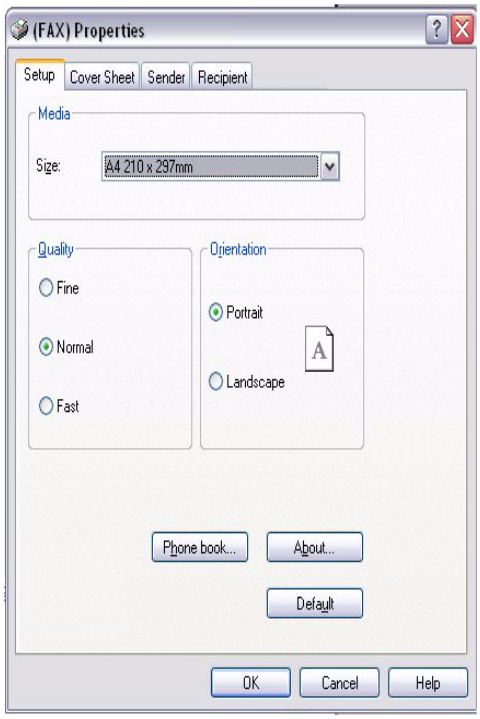
PRINTING TRANSMISSION REPORTS

1. Using the Down arrow key, scroll to `Menu` and press Enter.
2. Using the Down arrow key, scroll to `Admin Setup` and press Enter.
3. Using the arrow keys and on-screen keypad, enter the Administrator password. Highlight `Done` and press Enter.
4. Using the Down arrow key, scroll to `Fax Setup` and press Enter.
5. Using the Down arrow key, scroll to `Basic Setup` and press Enter.
6. Using the Down arrow key, navigate to the required report and press Enter. Choose from:
   - `MCF (Single Location)` - this prints a transmission report after each fax.
   - `MCF (Multi Location)` - this prints a summary report detailing which numbers were successful and any that failed.
   - `Error MCF` - this prints a report after each failed fax transmission.
   - `Image in MCF` - this includes an image of the fax on each transmission report.
7. Using the Up arrow key, scroll to `On` and press Enter.
8. Press the Left arrow key to exit the menu.

SENDING A FAX FROM YOUR PC

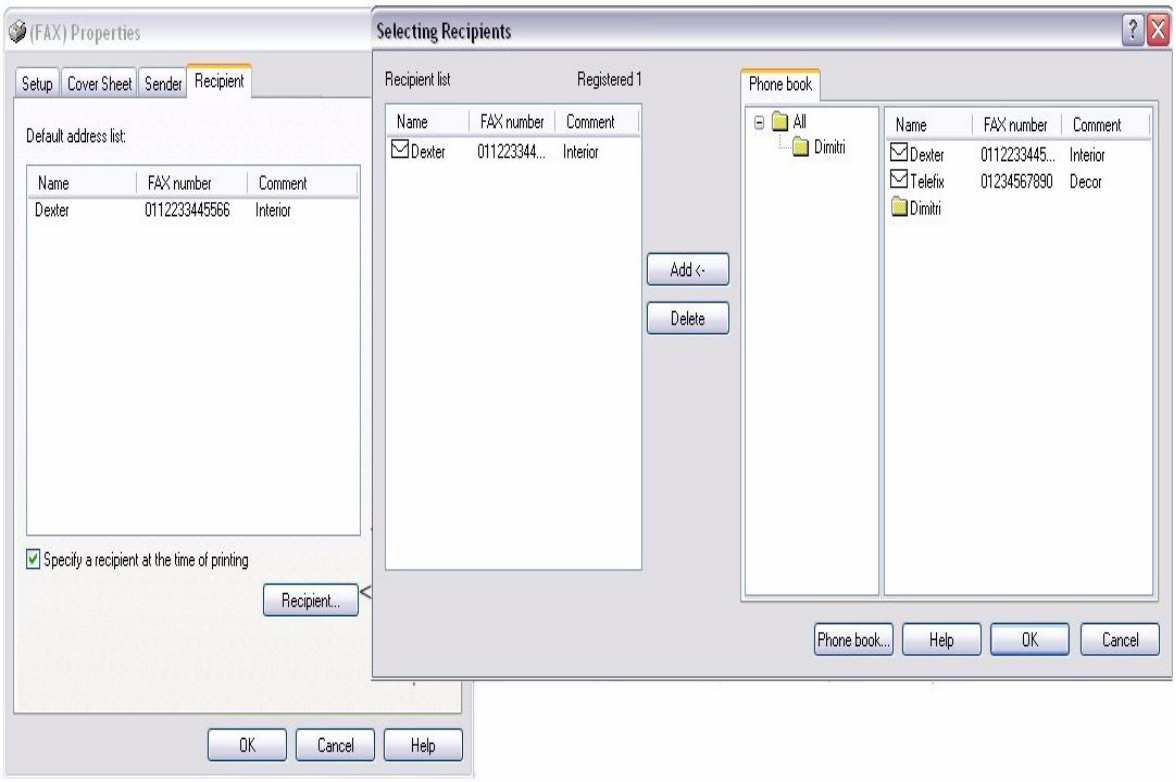
NOTE
You must have the fax driver installed on your PC. Download the latest fax driver from www.okiprintingsolutions.com.

1. From your application's File menu, select **Print**.
2. In the Select Printer window, highlight the fax driver option.
3. Press the **Preferences/Properties** button to display the fax driver window.



4. On the **Setup** tab:
   (a) Select the appropriate media size from the drop-down menu.
   (b) Set the resolution to Fine, Normal or Fast.
   (c) Set the orientation to Portrait or Landscape.
5. On the **Cover Sheet** tab:
   (a) Set the cover sheet usage settings as appropriate.
   (b) Select a cover sheet format.
6. On the **Sender** tab:
   (a) Enter your name.
   (b) Enter your fax number.
   (c) If required select the Add an outside call number checkbox and enter Outside call number as appropriate.

7. On the **Recipient tab**:



(a) Click the **Recipient**...button.

(b) Select a fax number from the Phone book panel on the right hand side. Refer to "Adding fax numbers to the phone book" on page 75

(c) Click the **Add** button to add this number to the recipient list.

(d) Repeat b and c as required to create the recipient list.

(e) If you need to remove a number from the recipient list, highlight the appropriate name and then click the **Delete** button.

(f) Once you have completed your list, click the **OK** button to close the Select Recipients window.

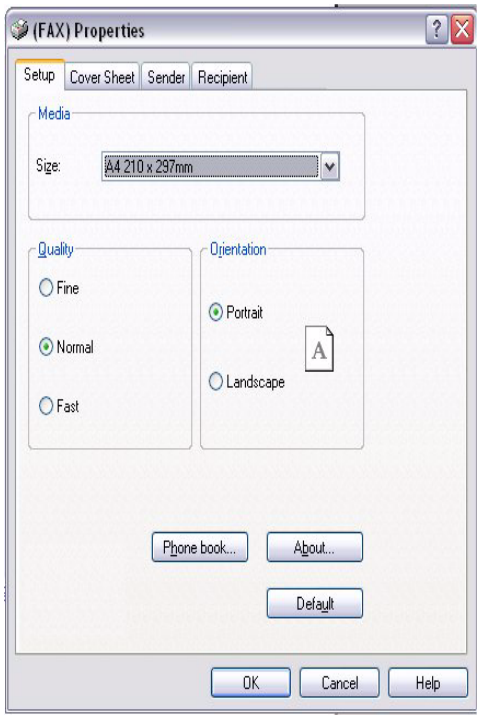
8. Click the **OK** button to close the fax driver window.

9. Click the **OK** button to start sending your fax.

ADDING FAX NUMBERS TO THE PHONE BOOK

To add a fax destination number to the phonebook:

1. From your application's File menu, select **Print**.
2. In the Select Printer window, highlight the fax driver option.
3. Press the **Preferences** button to display the fax driver window.



4. Click the **Phone book**... button.
   The phone book screen displays.
5. Select **FAX number** -> **New (Fax number)**.
6. Type in the fax number destination Name.
7. Type in the required FAX number.
8. If required, type in a Comment.
9. Click the **OK** button to save.

ADDING NEW GROUPS NUMBERS TO THE PHONE BOOK

To add a new group to the phone book:

1. From your application's File menu, select **Print**.
2. In the Select Printer window, highlight the fax driver option.
3. Click the **Preferences** button to display the fax driver window.
4. Click the **Phone book**... button.
   The phone book screen displays.
5. Select **Fax number -> New (Group)**.
6. Type in the Group name.
7. if required, type in a Comment.

8. Add recipients to the group list:

NOTE
Maximum 100 recipients in any one group.

(a) Select a fax number from the Phone book panel on the right hand side.

NOTE
You can add a new fax number directly by clicking the New (FAX number)... button and adding an entry to the phone book panel.

(b) Click the **Add** -> button to add this number to the group list.

(c) Repeat steps a and b as required to create the group list.

(d) If you need to remove a number from the recipient list, highlight the appropriate name and then press the <- **Delete** button.

9. Once you have completed your list, click the **OK** button to close the New Group window.

IMPORTING AND EXPORTING FAX NUMBERS

By using the import, export functions, you can manage fax numbers in a phonebook created on another computer.

1. In Windows:

XP: select **Start** > **Control Panel > Printer and Other Hardware > Printers and Faxes**.

Server 2003: select **Start > Printers and Faxes**.

2000: select **Start > Settings > Printers**.

2. Right-click your machine icon and select **Printer Preferences**.

3. In the **Setup** tab, click the **Phone Book** button.

4. From the pull-down menu, click **Tool > Export**.

5. In the Export File screen, enter a name for the file and click the **Save** button. The phonebook is saved.

6. Import the saved phonebook file to the other computer:

(a) In the fax driver installed on the computer that the phone book file was imported, start the phonebook in the same way, and click **Tool > Import** in the menu.

(b) In the Import File screen, select a phone book file to import. When the **Open** button is clicked, data is imported to the phone book.

NOTE
Registration of groups cannot be exported. (Destinations included in the group are exported.)

If the same name is already included in the phonebook of the fax driver to import, it is skipped.

PRINTING SETTINGS IN WINDOWS

Your printer's operator panel menus provide access to many options.

The Windows printer driver also contains settings for many of these items. Where items in the printer driver are the same as those in the operator panel menus, and you print documents from Windows, the settings in the Windows printer driver will override those settings in the operator panel menus.

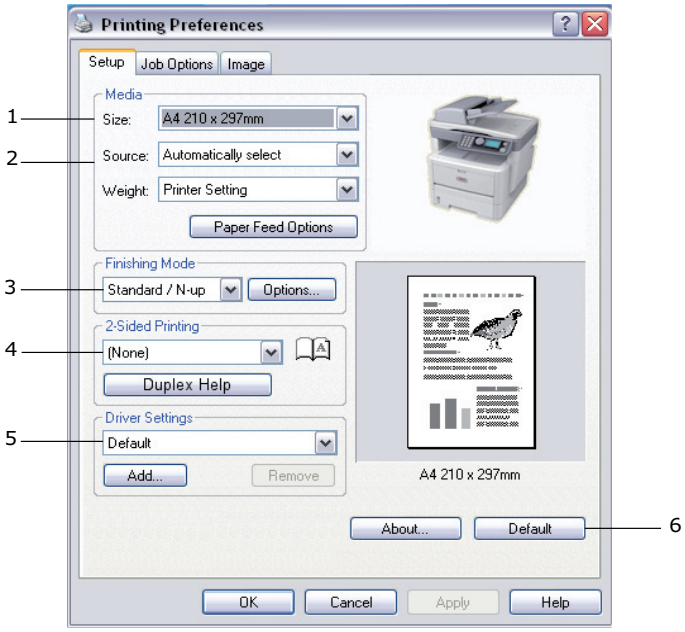
PRINTING PREFERENCES IN WINDOWS APPLICATIONS

When you choose to print your document from a Windows application program a Print dialogue box appears. This dialogue usually specifies the name of the printer on which you will print your document. Next to the printer name is a **Properties** button.

When you click **Properties** a new window opens which contains a short list of the printer settings available in the driver, which you can choose for this document. The settings available from within your application are only those which you may want to change for specific applications or documents. Settings you change here will usually only last for as long as the particular application program is running.

PCL EMULATION

Setup tab



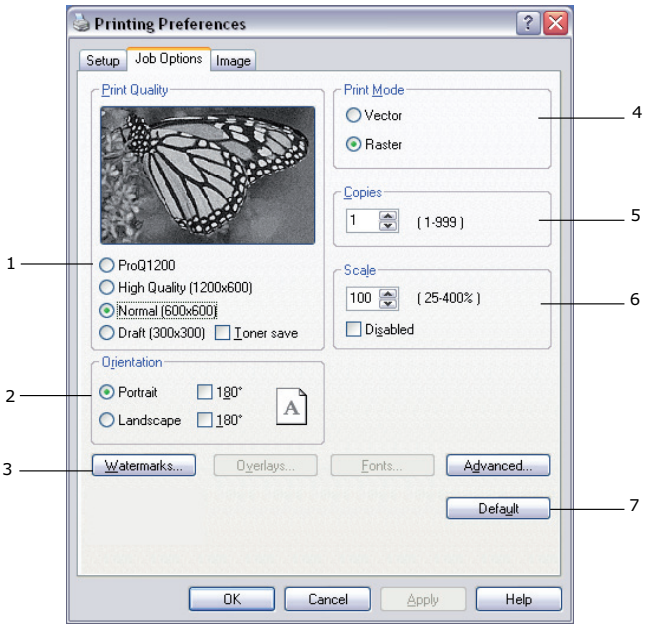
1. Paper size should be the same as the page size of your document (unless you wish to scale the printout to fit another size), and should also be the same as the size of paper you will feed into the printer.
2. You can choose the source of the paper to feed, which may be Tray 1 (the standard paper tray), Manual (MB460) or the Multi Purpose Tray (MB470, MB480), Tray 2 (if you have the optional second paper tray installed). You can also click on the appropriate part of the screen graphic to select your preferred tray.
3. A variety of document finishing options can be selected, such as normal one page per sheet, or N-up (where N can be 2 or 4) for printing scaled down pages at more than one page per sheet.
4. Under 2-sided Printing, you can choose from auto or manual. Under manual 2-sided Printing you can choose to print on one side of a sheet only or to use 2-sided printing (duplex printing). Your printer allows you to carry out manual duplex

printing, meaning you must pass the paper through the printer twice. For more information, see "2-sided printing" on page 85. The Duplex Help button also offers guidelines on how to carry out manual duplex printing.

5. If you have changed some printing preferences before and saved them as a set, you can recall them to avoid having to set them individually each time you need them.

6. A single on-screen button restores the default settings.

Job options tab



1. The output resolution of the printed page can be set as follows.

> The ProQ1200 setting for MB460 prints at 600 X 2400dpi. This setting requires the most printer memory and takes the longest to print. Your printed pages can be scaled to fit larger or smaller stationery. It is the best option for printing photographs.

> The High Quality setting prints at 600 X 1200dpi for MB460 and 1200 x 1200dpi for MB470 and MB480 is the best option for printing vector objects such as graphics and text.

> The Normal setting prints at 600 x 600dpi and is suitable for most printing jobs.

> The Draft setting prints at 300 x 300dpi and is suitable for printing draft documents that contain mainly text. You can select Toner Saving to save toner for some print jobs.

2. Page orientation can be set to either portrait (tall) or landscape (wide). Both views can be rotated by 180 degrees.

3. You can print watermark text behind the main page image. This is useful for marking documents as draft, confidential, etc.

If you would like to print on special stationery, such as forms and letterhead, but do not want to use pre-printed stationery, you can create your own using Overlays. For more information on Overlays and Macros refer to "Overlays and Macros (Windows only)" on page 103. The Overlays button also offers guidelines on how to carry out manual duplex printing.

4. In Raster (bitmap) mode, processing of the page image is done in the computer leaving little processing for the printer to do, although the file size may be large. In Vector mode, file sizes may be smaller and so transmission over a network, for

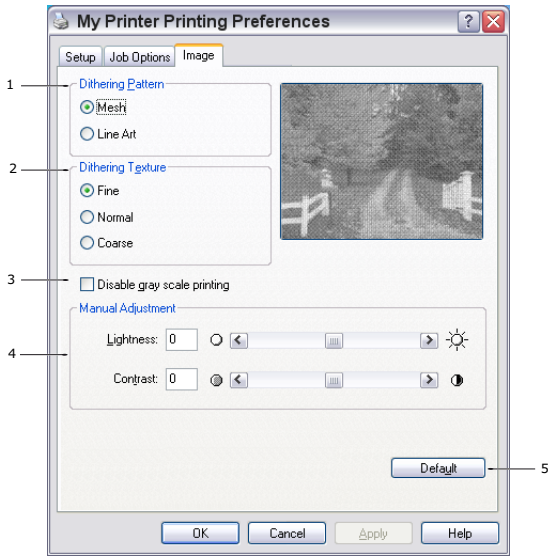
example, may be faster. These effects are more pronounced for graphics printing than for text printing.

5. You can select up to 999 copies to print consecutively, although you will need to top up the paper tray during such a long print run.

6. Your printed pages can be scaled to fit larger or smaller stationery, within a range of 25% to 400% of the original size.

7. A single on-screen button restores the default settings.

Image tab



1. Dithering produces an intermediate greyscale by adjusting the combination of dots used in printing. Selecting a setting determines the degree of detail with which a graphics image will be printed. Mesh determines that a screen of dots is used for dithering while Line Art determines that an array of lines is used for dithering.

2. Select dithering texture by setting the size of dots used in the halftone screen.

3. Set this control to print greyscale effects in black without dithering. Select the check-box to disable greyscale printing or de-select the check-box to enable greyscale printing.

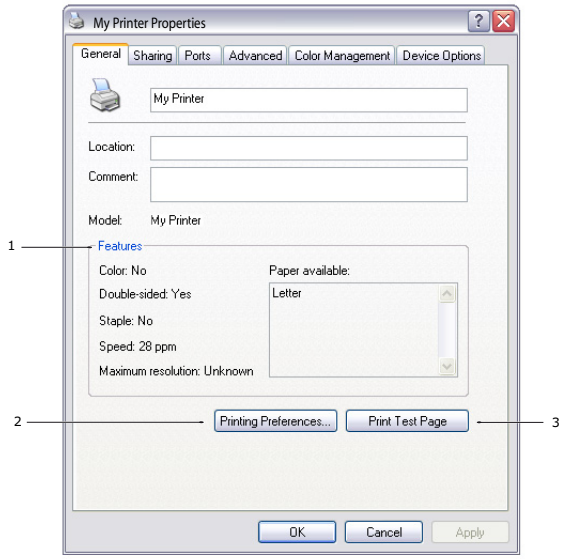
4. You can manually adjust lightness (the higher the setting the lighter the print) and contrast (the higher the setting the greater the contrast).

5. A single on-screen button restores the default settings.

Setting from Windows control panel

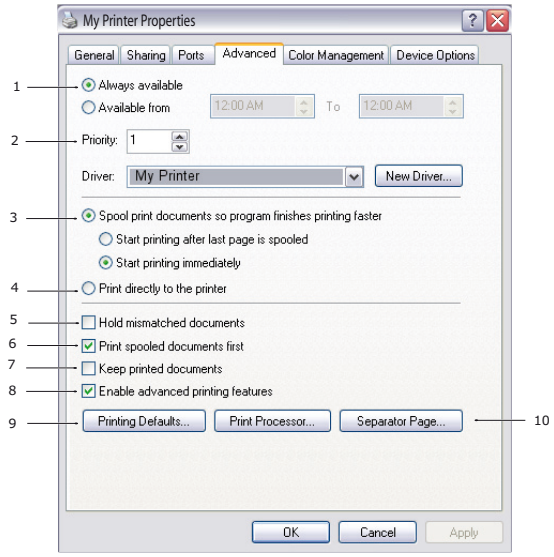
When you open the driver properties window directly from Windows, rather than from within an application program, a somewhat more extensive range of settings is provided. Changes made here will generally affect all documents you print from Windows applications, and will be remembered from one Windows session to the next.

General tab



1. This area lists some of the main features of your printer, including optional items.
2. This button opens the same windows as described earlier for items which can be set from within application programs. Changes you make here, however, will become the new default settings for all Windows applications.
3. This button prints a test page to ensure that your printer is working.

Advanced tab



1. You can specify which times of day your printer will be available.
2. Indicates current priority, from 1 (lowest) to 99 (highest). Highest priority documents will print first.
3. Specifies that documents should be spooled (stored in a special print file) before being printed. The document is then printed in the background, allowing your application program to become available more quickly. Options follow:

   This specifies that printing should not start until the last page has been spooled. If your application program needs a lot of time for further computation in the middle of printing, causing the print job to pause for more than a short period, the printer could prematurely assume that the document has finished. Selecting this option would

prevent that situation, but printing will be completed a little later, as the start is delayed.

This is the opposite choice to the one above. Printing starts as soon as possible after the document begins spooling.

4. This specifies that the document should not be spooled, but printed directly. Your application will not normally be ready for further use until the print job is complete. This requires less disk space on your computer, since there is no spool file.

5. Directs the spooler to check the document setup and match it to the printer setup before sending the document to print. If a mismatch is detected, the document is held in the print queue and does not print until the printer setup is changed and the document restarted from the print queue. Mismatched documents in the queue will not prevent correctly matched documents from printing.

6. Specifies that the spooler should favour documents which have completed spooling when deciding which document to print next, even if completed documents are lower priority than documents which are still spooling. If no documents have completed spooling, the spooler will favour larger spooling documents over shorter ones. Use this option if you want to maximise printer efficiency. When this option is disabled the spooler chooses documents based only on their priority settings.

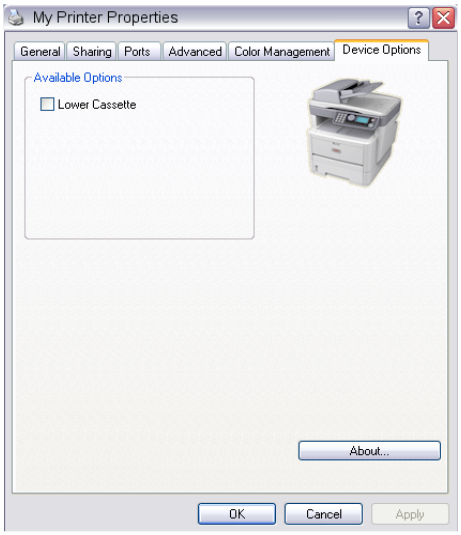
7. Specifies that the spooler should not delete documents after they are completed. This allows documents to be re submitted to the printer from the spooler instead of printing again from the application program. If you use this option frequently it will require large amounts of disk space on your computer.

8. Specifies whether advanced features, such as pages per sheet, are available, depending on your printer. For normal printing keep this option enabled. If compatibility problems occur you can disable the feature. However, these advanced options may then not be available, even though the hardware might support them.

9. This button provides access to the same setup windows as when printing from applications. Changes made via the Windows Control Panel become the Windows default settings.

10. You can design and specify a separator page that prints between documents. This is particularly useful on a shared printer to help each user find their own documents in the output stack.

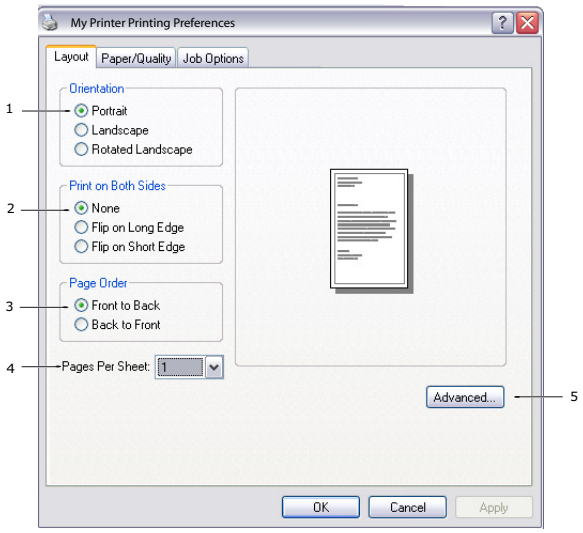
Device options tab



In this window you can select which optional upgrades are installed on your printer. See the chapter entitled “Installing options”.

PS EMULATION (MB470/MB480)

Layout tab



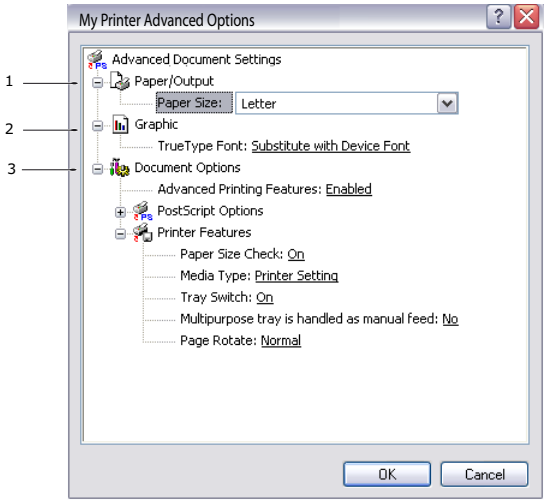
1. Page orientation can be set to portrait (tall), landscape (wide) or landscape rotated by 180 degrees.

2. Print on both sides (duplex printing) can be set to long edge or short edge of the document.

3. Printed page order can be set as front to back or back to front of the document.

4. Set the number of pages to be printed on a single sheet. You can also set it to print a booklet.

5. Click the **Advanced** button to be able to set further document options as follows:

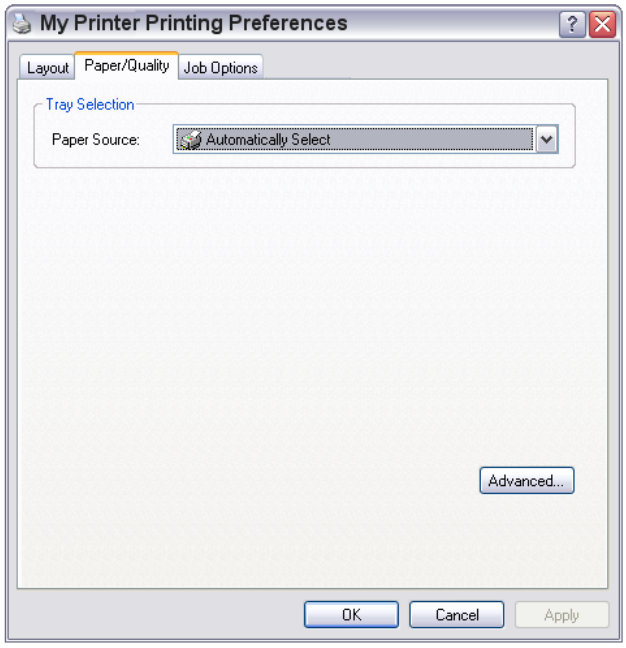


(a) Select the required printed paper size.

(b) You can substitute another font for TrueType Font.

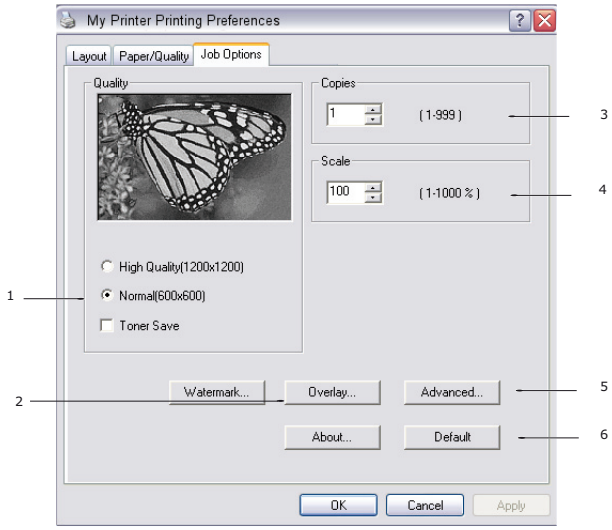
(c) You can set other document options as required, including PostScript options and printer features.

Paper/Quality tab



You can set the paper source or leave it as automatic selection and by using the **Advanced** button you have access to the same set of options as described above for the **Layout** Tab.

Job options tab



1. The output resolution of the printed page can be set as follows.

> The High Quality setting prints at 1200 x 1200dpi for MB470 and MB480 and is the best option for printing vector objects such as graphics and text.

> The Normal setting prints at 600 x 600dpi and is suitable for most printing jobs. You can select Toner Saving to save toner for some print jobs.

2. You can print watermark text behind the main page image. This is useful for marking documents as draft, confidential, etc.

   If you would like to print on special stationery, such as forms and letterhead, but do not want to use pre-printed stationery, you can create your own using Overlays. For more information on Overlays and Macros refer to "Overlays and Macros (Windows only)" on page 103. The Overlays button also offers guidelines on how to carry out manual duplex printing.

3. You can select up to 999 copies to print consecutively, although you will need to top up the paper tray during such a long print run.

4. Your printed pages can be scaled to fit larger or smaller stationery.

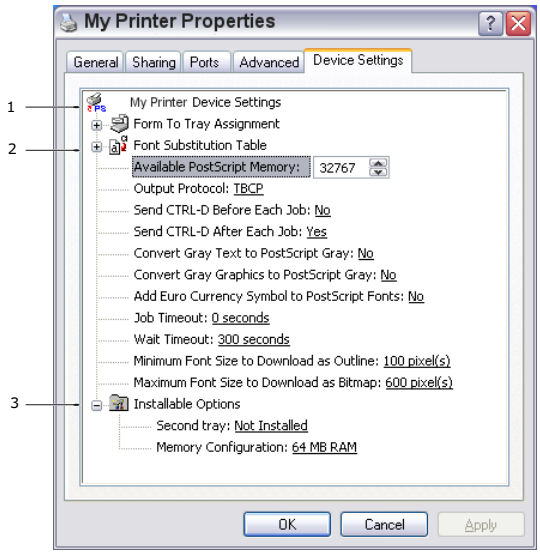
5. Using the **Advanced** button gives you access to the facility to set mirror image printing and negative image printing.

6. A single on-screen button restores the default settings.

SETTINGS FROM THE CONTROL PANEL

The main tabs are the **General Tab**, **Advanced Tab** and **Device Settings Tab**. The General and Advanced tabs are the same as for PCL emulation described earlier.

Device settings tab



1. You can set the desired paper sizes in each of the available paper feed trays.

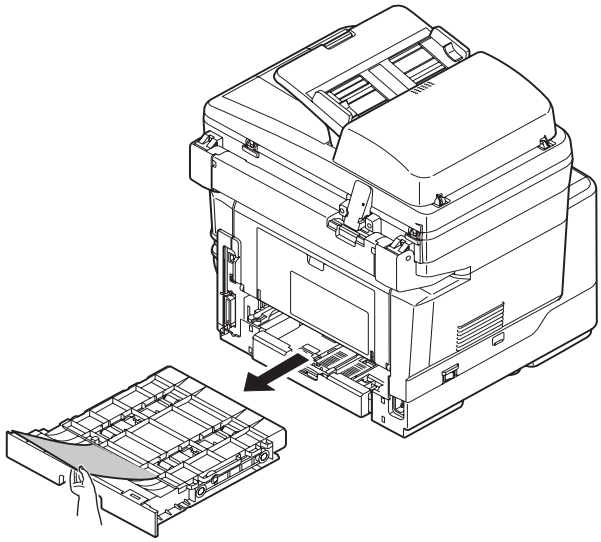
2. You can make a variety of font settings depending on your application.

3. You can set which optional upgrades are installed on your printer. See the chapter entitled "Installing options".

2-SIDED PRINTING

The duplex unit adds the function of two-sided printing, using less paper and making large documents easier to handle. It also enables booklet printing, which uses even less paper.

The duplex unit slides straight into the rear of the printer and requires no tools to install.



This machine has the option of Auto Duplex and Manual Duplex printing.

NOTE
The steps in the process relate to Windows XP PCL. Other operating system windows may appear slightly different, but the principles are the same.

AUTO DUPLEX PRINTING

This option provides automatic two-sided printing only for Letter, A4, Legal 13, 13.5 and 14 and Custom paper sizes, using paper stocks from 75 - 105g/m².

To carry out Auto Duplex Printing:

1. Select **File** -> **Print** and click the **Properties** button.
2. Select the input tray (Tray1, Tray2 (optional), Multi Purpose Tray) from the Source drop down.
3. In the Duplex printing drop down menu, select either **Long Edge (Auto)** or **Short Edge (Auto)** according to your printing preferences.
4. If you require further information, click the **Duplex Help** button.
5. Click the Print button.

MANUAL DUPLEX PRINTING USING THE PAPER TRAY (WINDOWS ONLY)

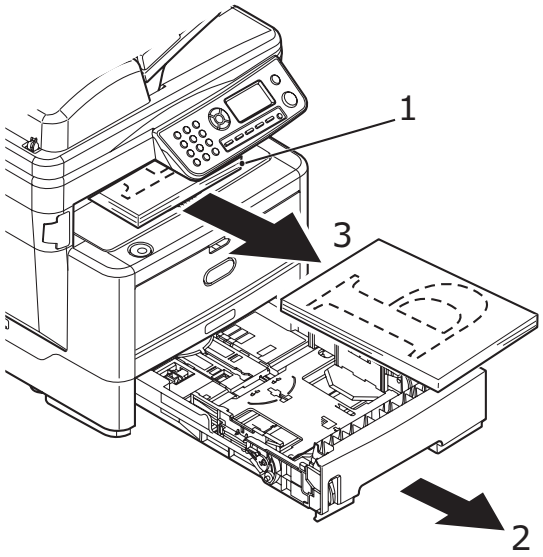
NOTE
Manual Duplex printing is available only for Windows PCL Driver.

To carry out 2-sided, or Manual Duplex Printing you must pass paper through the machine twice. You can carry out 2-sided printing using the Paper Tray (for paper sizes see "Cassette trays" on page 24) or the Multi Purpose Tray (for paper sizes see "Multi purpose tray" on page 24).

NOTE
You cannot use A6 paper size for printing from Tray 1 or Tray 2 (option).

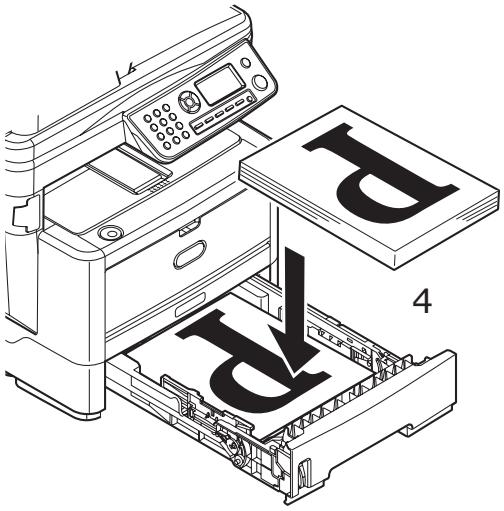
1. Ensure that there is enough paper in the Paper Tray to carry out the print job.
2. Select **File -> Print** and click the **Properties** button.
3. Select the **Multi Purpose Tray/Manual** from the Source drop down.
4. In the 2-sided printing drop down menu, select either **Long Edge (Manual)** or **Short Edge (Manual)** according to your printing preferences. If you require further information, click the **Duplex Help** button. Then, Click the **Print** button.

5. Every second page (1) of your document is printed first. When this is complete, a message appears on screen prompting you to take the paper, flip it and replace it in the Paper Tray.



6. Open the Paper Tray (2).

7. Take the printed paper from the Output Stacker (3) and place it in the Paper Tray, ensuring that the printed side is facing up and the bottom of the page facing into the machine (4).



8. Close the Paper Tray and press the **Start** button. The message window should disappear from your screen and the document finishes printing the remaining pages of your document.

NOTE
You must press the Start button to start the printing for other side. The default time is set to one minute, failing which, the data is deleted and not printed.

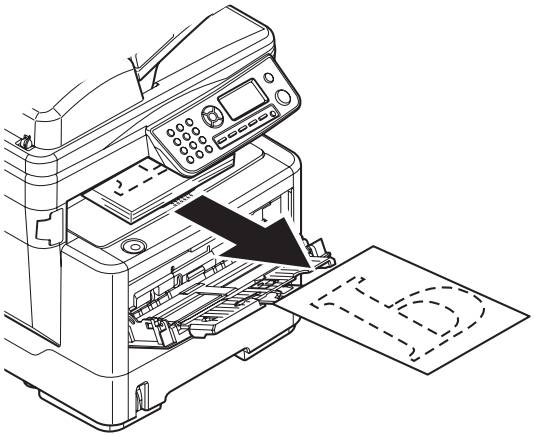
MANUAL DUPLEX PRINTING USING THE MULTI PURPOSE TRAY

NOTE

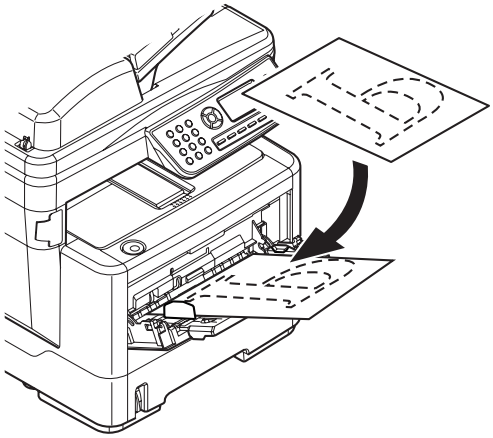
> *When using the Multi Purpose Tray on MB460, feed one sheet at a time.*

> *For loading instructions see "Multi purpose tray" on page 30.*

1. Position the paper guides on the Multi Purpose Tray according to the paper size.
2. Place paper one sheet at a time in the Manual Feed Tray. The paper is automatically gripped in position.
3. Select **File -> Print** to display the Print dialog box.
4. Click the **Properties** button.
5. Select the **Multi Purpose Tray** from the Source drop down.
6. On the 2-sided printing drop down menu, select either **Long Edge (Manual)** or **Short Edge (Manual)** according to your printing preferences. If you require further information, click the **Duplex Help** button.
7. When every second page has printed, take the paper from the output stacker.



8. Set the paper one page at a time in the Multi Purpose Tray with the printed side facing down and the top of the page facing into the machine. Ensure that the paper is gripped in place.



9. Press the **Start** button. The remaining pages of your document print on the blank side of the paper, one sheet at a time as you feed it into the Multi Purpose Tray.

PRINTER SETTINGS IN MAC OS X

The information in this section is based on Mac OS X Tiger (10.4). Other versions may appear slightly different, but the principles are the same.

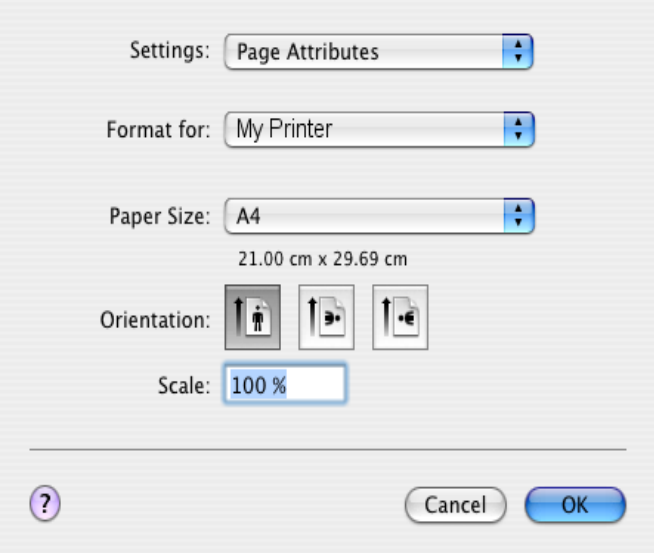
PCL EMULATION

SETTING PRINTING OPTIONS

You can choose your printer and select options for how you want your documents to print from the Print dialog box.

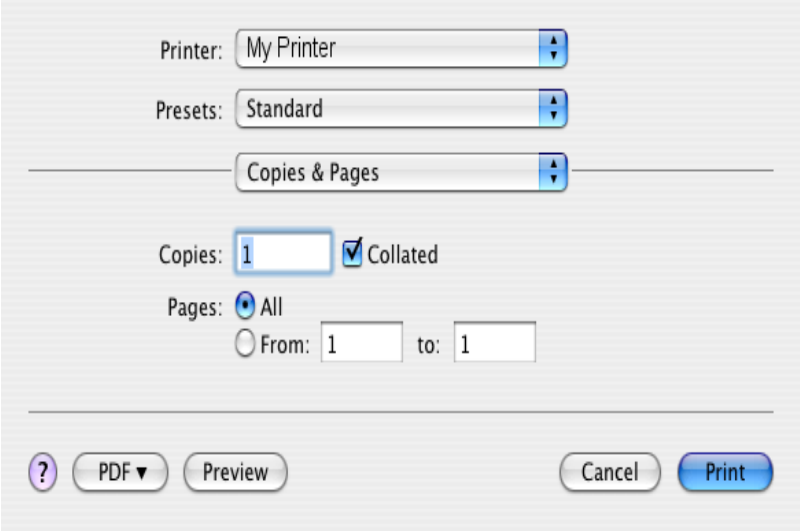
To set your printer options:

1. Open the document you want to print.
2. To change the paper size or page orientation, select **File > Page Setup**. For a description of each option, see "Page setup options" on page 91



3. Close the Page Setup dialog box.
4. Select **File > Print**.
5. Select your printer from the Printer drop-down menu.

6. To change any printer driver settings, select the required options from the Settings drop-down menu. You can select more options from the Copies & Pages menu. For a description of these options, see "Print Options" on page 92

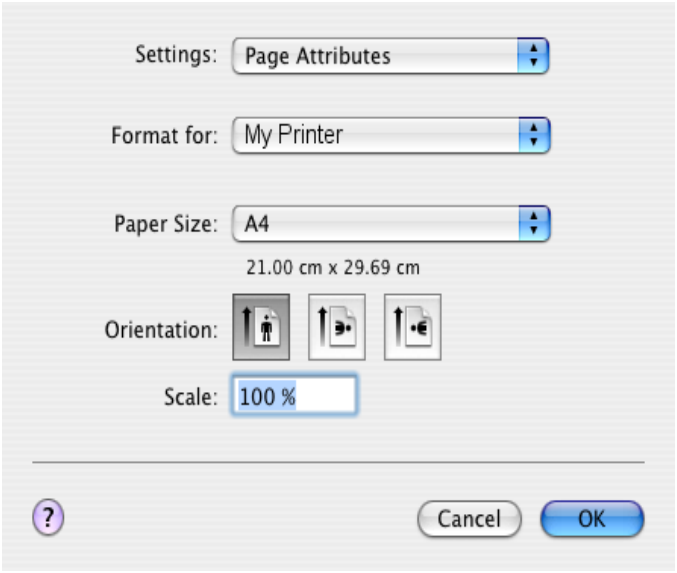


7. Click the **Print** button.

SETTING PRINTING OPTIONS - SAVING DRIVER SETTINGS

You can save a set of printer driver options to use for future documents.

1. Open the document you want to print.
2. To change the paper size or page orientation, select **File > Page Setup**.



3. Select **Save As Default** from the Settings drop-down menu.
4. Select **File > Print**.
5. To save the current printer driver settings as a preset, select **Save As** from the Preset menu.
6. Enter a name for your preset and click **OK**.

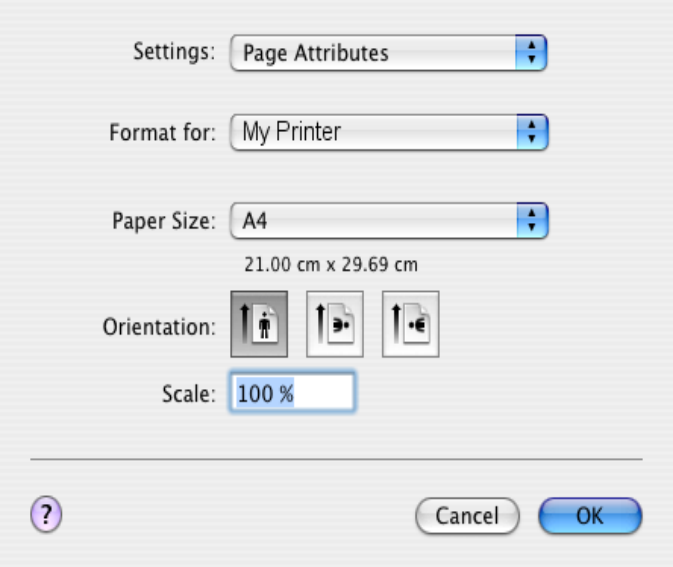
CHANGING THE DEFAULT PRINTER AND PAPER SIZE

The following steps describe how to change your default printer and the paper size options.

1. Select **Apple menu > System Preferences**.
2. Click the **Print & Fax** icon.
3. Select your printer in the **Selected Printer** in Print Dialog drop-down menu.
4. Select your required paper size in the **Default Size** in Page Setup drop-down menu.

PAGE SETUP OPTIONS

This section provides a description of the page setup options available to you.



Page attributes

You can select Save As Default to use the current Page Setup settings as a standard for all documents.

Format for

Allows you to select your printer model before changing options such as Paper Size and Orientation.

Paper size

Select a paper size to match your documents and the paper loaded in the printer. The paper margin is 4.2mm at all edges. To specify your own paper sizes, select **Manage Custom Sizes**...

Scale

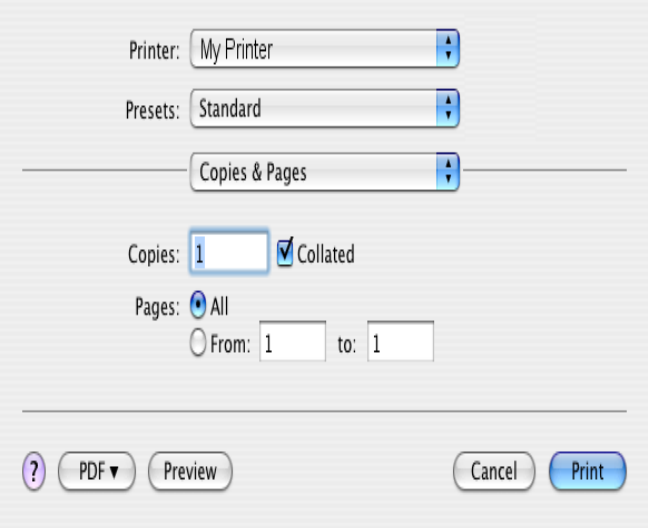
You can scale documents up or down to fit onto different paper sizes. To fit your document on a specific paper size, select **Options** in the **Paper Handling** drop-down menu in the Print Options dialog box (see "Print Options" on page 92).

Orientation

You can select a portrait or landscape option. When using landscape, you can rotate the document 180 degrees.

PRINT OPTIONS

COPIES & PAGES



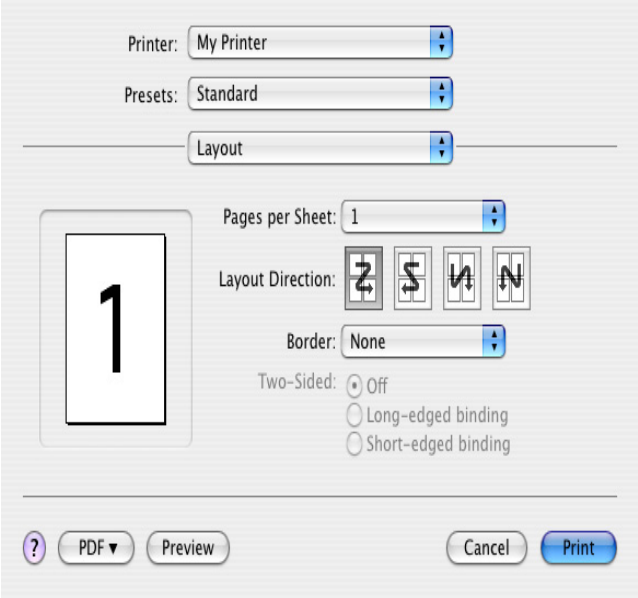
Copies

This option allows you to enter the number of copies to print. If you select Collate, all pages of the document will print before the next copy prints.

Pages

You can select whether to print all pages of a document or just a section of it.

Layout



Pages per sheet

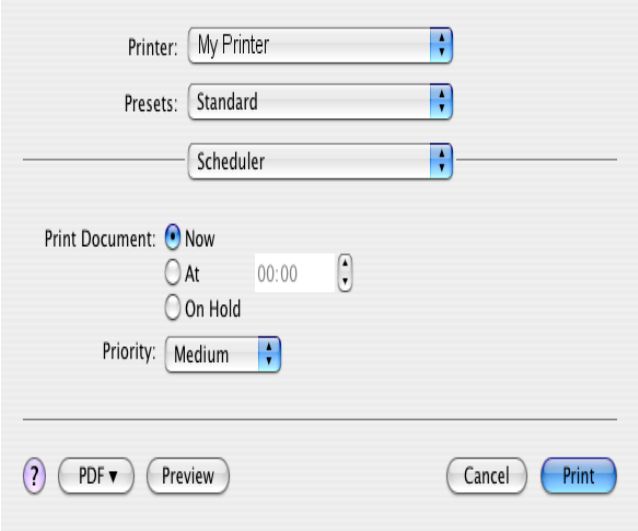
You can shrink multiple pages and print them on a single sheet of paper. For example, choosing 4-up will tie four of your document's pages across a single sheet of paper.

You can control the order in which the documents are tiled and also choose to surround each document page with a border.

Two-sided

You cannot use the two sided printing options in this panel. Use the options in "Duplex" on page 94 instead.

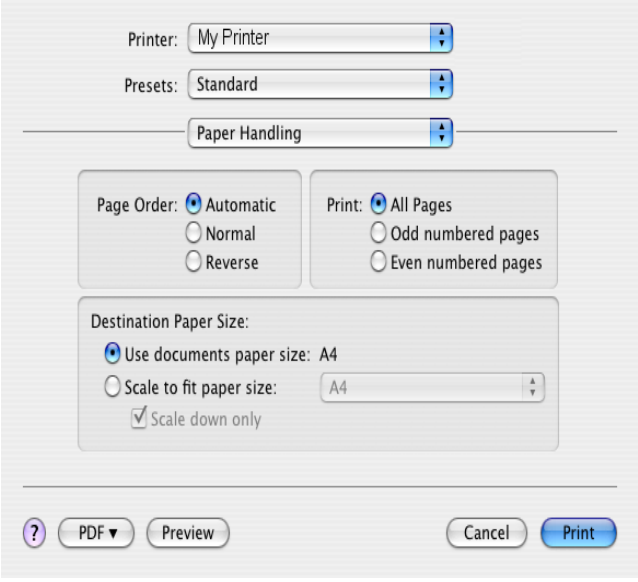
Scheduler



This option lets you choose whether to print your document immediately, or defer printing until later. You can also assign a priority to a print job.

These features are useful if you are printing large documents that take a long time to print.

Paper Handling



Page order

You can choose to print your document in the normal page order (1,2,3...) or reverse order (...3,2,1).

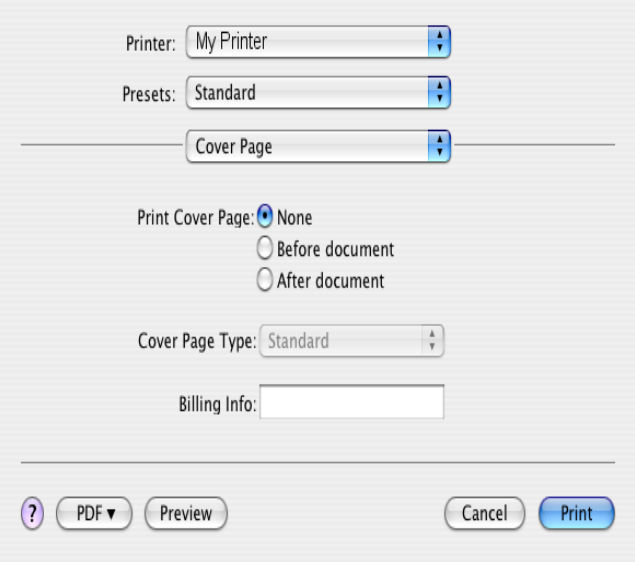
Print

This option allows you to choose whether to print only odd or even number of pages. This is useful if you are using manual duplex for which you first print all odd pages, re-insert the paper in the printer and then print all even pages.

Destination paper size

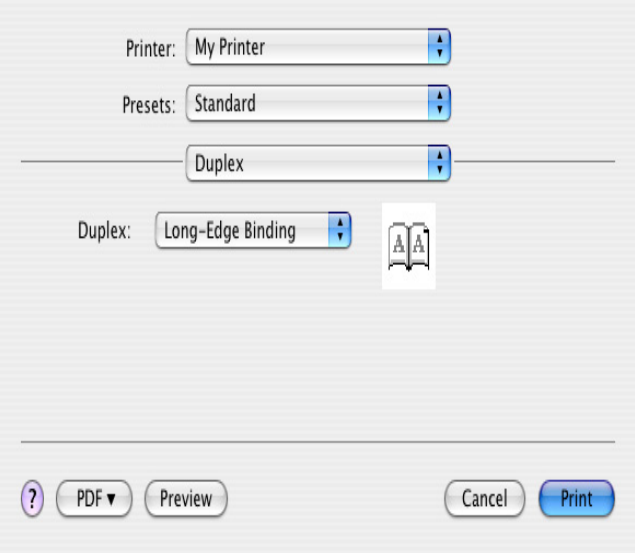
Scale documents to fit on the size of paper in your printer. For example, you can take a document formatted for A3 and print it on A4 paper using an A4 printer.

COVER PAGE



Choosing a cover page may help you identify your printed document in a large pile of paper. This is useful in a busy office with many people sharing the printer.

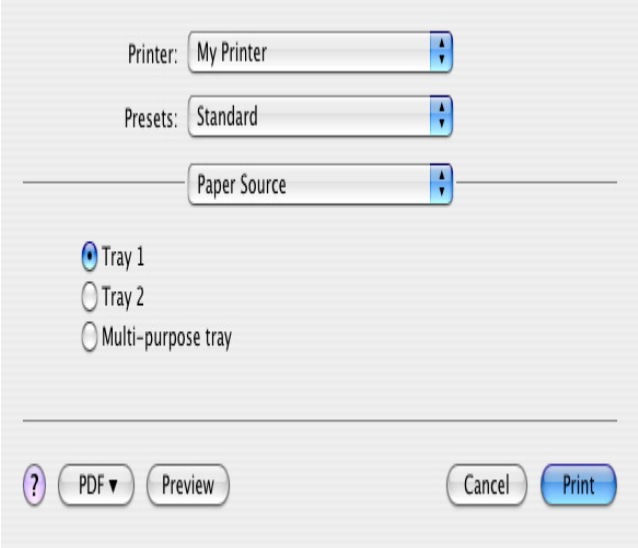
DUPLEX



Using the duplex, you can print on both sides of the paper.

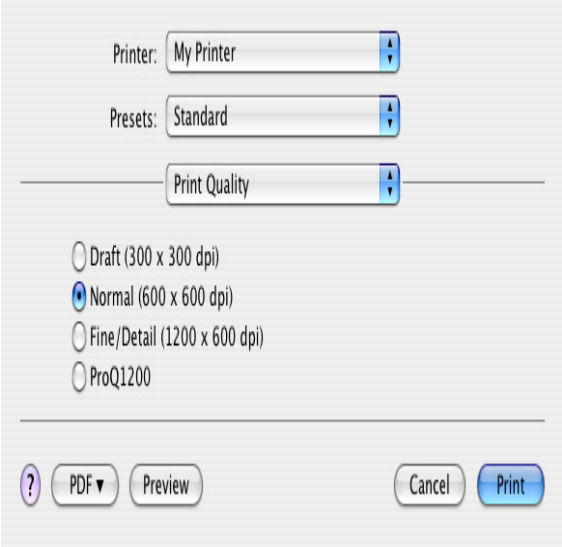
Long Edge Binding prints pages that read like a normal book. Short Edge Binding prints pages that read like a notepad.

Paper source



This option allows you to select the paper tray to use for your print job.

Print quality

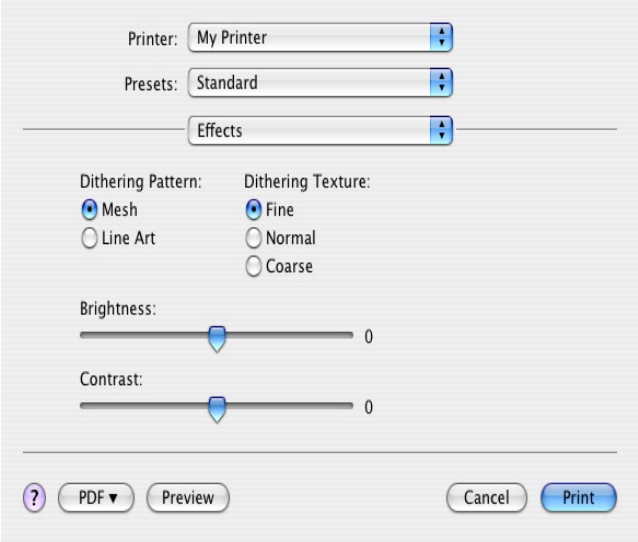


MB460

MB470/MB480

Use this option to select the print resolution. The ProQ1200 (MB460) and High Quality (MB470/MB480) setting produces the best graphic images, but these images take longer to print.

EFFECTS



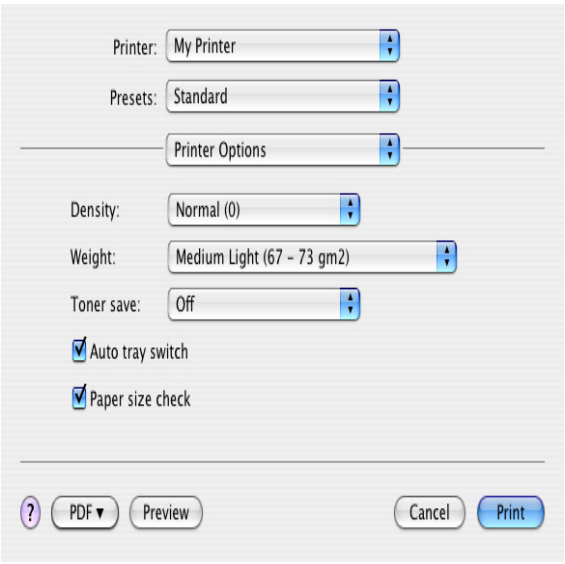
Dithering produces an intermediate greyscale by adjusting the combination of dots used in printing. Selecting a setting determines the degree of detail with which a graphics image will be printed. Mesh determines that a screen of dots is used for dithering while Line Art determines that an array of lines is used for dithering.

Select dithering texture by setting the size of dots used in the halftone screen.

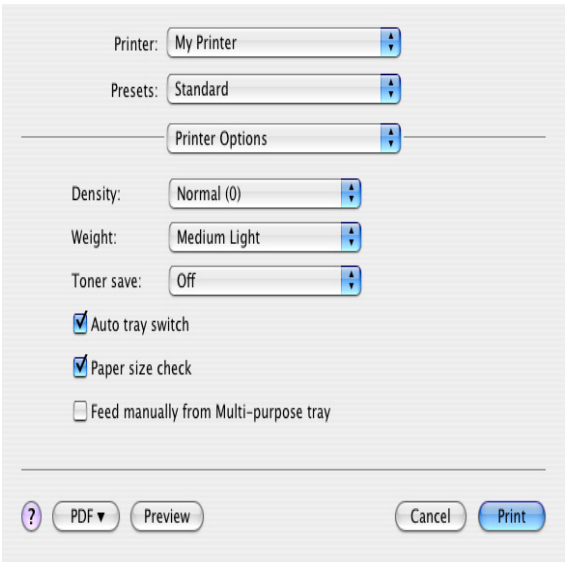
Adjust the brightness or contrast based on the original quality of the document.

PRINTER SETUP OPTIONS

PRINTER OPTIONS



MB460



MB470/MB480

Density

Select the density from Lightest (-2) to Darkest (+2) depending on the quality of the original document.

Weight

Select the thickness or type of paper in the printer. It is important to set this correctly as it affects the temperature at which the toner is fused to the paper. For example, if you are printing on normal A4 paper, do not select Labels or Transparency as this may cause toner smearing and paper jam.

Toner Save

Toner Save uses less toner when printing your document. This is best suited to draft text documents as it lightens the print significantly.

Auto Tray Switch

If the printer runs out of paper in the current tray, the Auto Tray Switch automatically changes to a tray that has the same type of paper and continues printing.

Paper size check

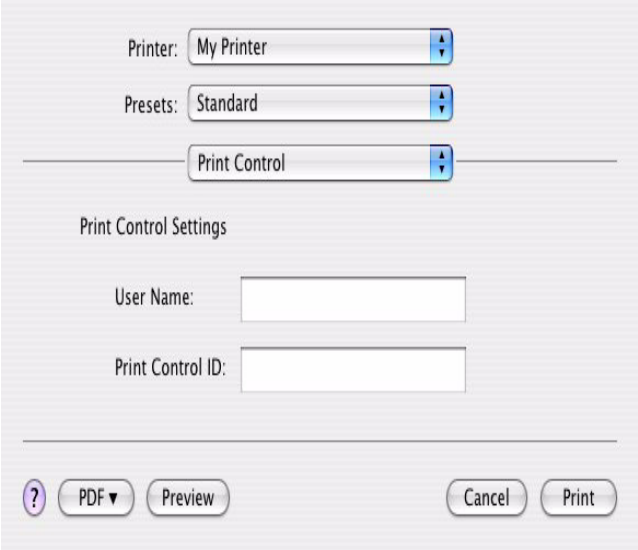
Select Paper Size check if you want the printer to warn you when the document paper size is different from the paper in the printer.

A warning message is displayed and printing continues when you load the correct paper in the paper tray and press **START**. When this option is deselected, the printer uses the paper loaded in the selected tray regardless of the document size.

Feed manually from Multi-purpose tray (MB470/MB480)

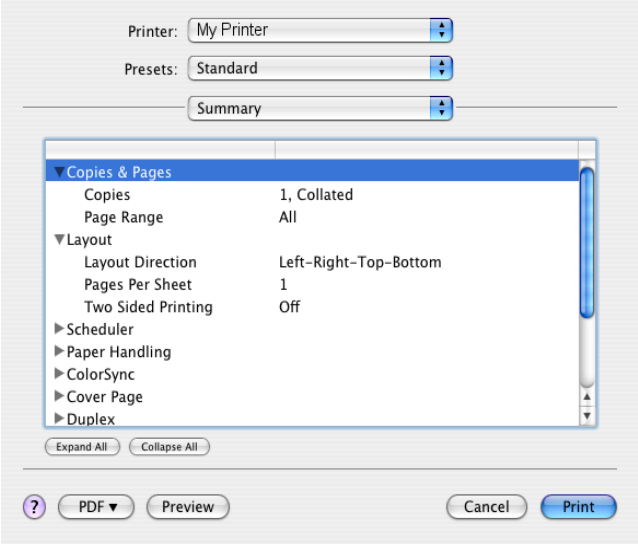
Select this option if you want the printer to wait until you press the START button when feeding from the Multi-purpose Tray. This can be useful if printing envelopes.

PRINT CONTROL



If you are using the Windows Print Control Server software to manage printers, enter your assigned user name and ID. This information is sent to the printer with your print job and is recorded by the printer.

SUMMARY



This option displays a summary of all selected print options for the current job.

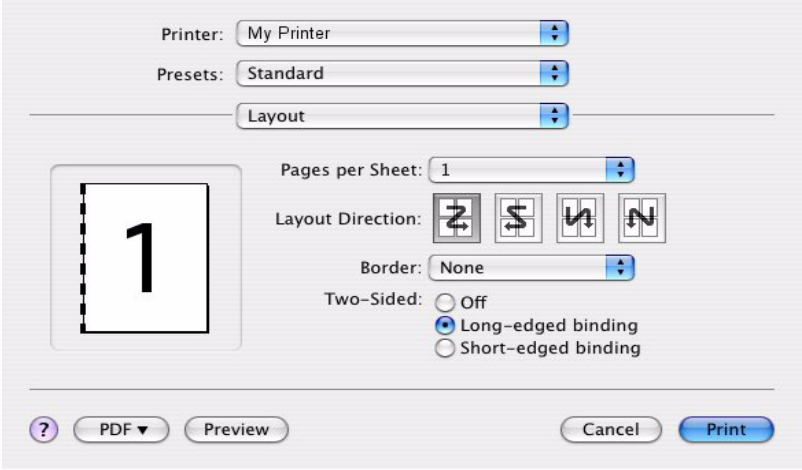
PS EMULATION (MB470/MB480)

COPIES & PAGES

Refer to "Copies & Pages" on page 92.

LAYOUT

Refer to "Pages per sheet" on page 92.



The Two-sided option is used for Duplex printing. Long-edged Binding prints pages that read like a normal book. Short-edged Binding prints pages that read like a notepad.

SCHEDULER

Refer to "Scheduler" on page 93.

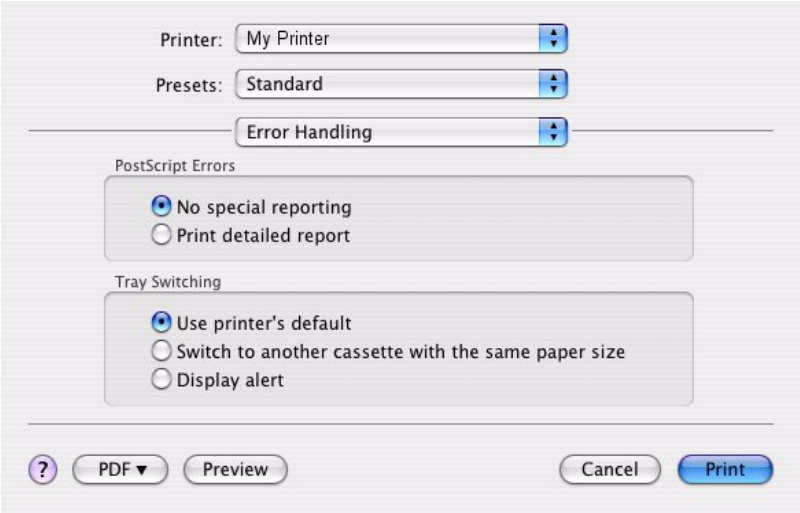
PAPER HANDLING

Refer to "Paper Handling" on page 93.

COVER PAGE

Refer to "Cover page" on page 94.

ERROR HANDLING



Postscript errors

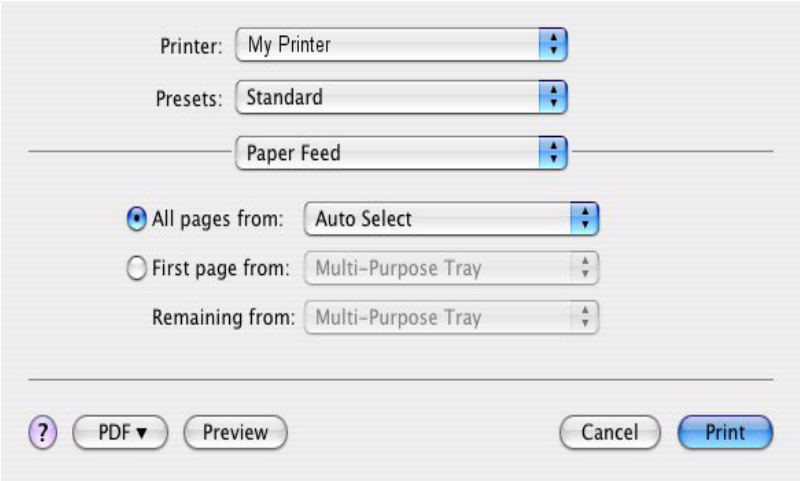
If an error occurs and stops the print job, you can use select the Print detailed report under Error Handling, which will print the error page in detail. This will help you identify the error and take suitable action.

Tray switching

If the printer runs out of paper in the current tray, the Auto Tray Switch automatically changes to a tray that has the same type of paper and continues printing.

By selecting Display alert, a pop-up box will display on your application if there is a mismatch between the tray settings and paper size settings.

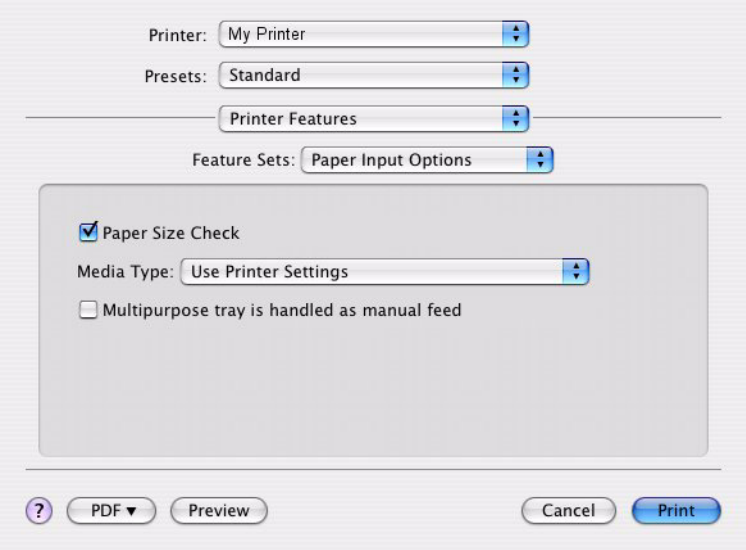
PAPER FEED



If you want the first page of a document printed on a different media, you can load the special media in the Multi-purpose tray and select the first page to be printed by setting Multi-purpose tray as the source. The remaining pages of the document can be loaded in the cassette tray and you can set that as the paper source. The entire document will be printed in one print job.

PRINTER FEATURES

Paper input options



Paper size check

Select Paper Size check if you want the printer to warn you when the document paper size is different from the paper in the printer.

A warning message is displayed and printing continues when you load the correct paper in the paper tray and press Start. When this option is deselected, the printer uses the paper loaded in the selected tray regardless of the document size.

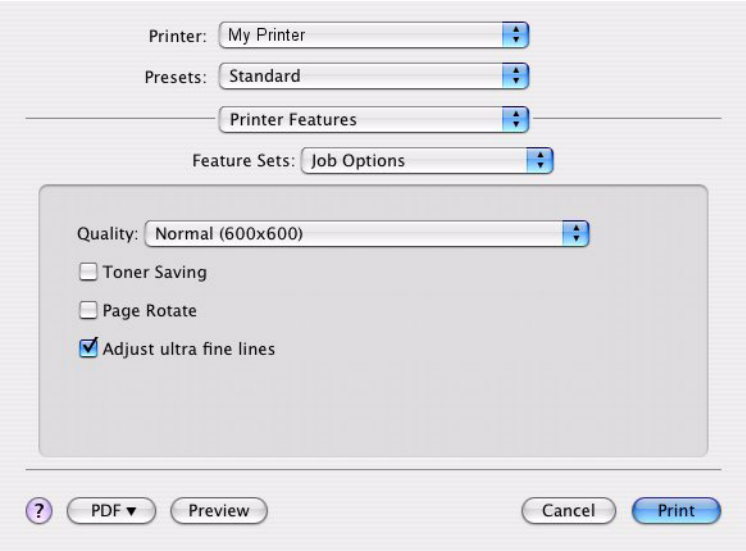
Media Type

Specify the appropriate weight and kind of paper you are using. Do not choose Label or Transparency when printing on plain paper. This will cause paper jam or print quality problems.

Multipurpose tray is handled as manual feed

Select this option if you want the printer to wait until you press the START button when feeding from the Multi-purpose Tray. This can be useful if printing envelopes.

Job options



Quality

Use this option to select the print resolution; 600 x 600dpi (normal printing), 1200 x 1200 (choose this for high quality print). The high quality print resolution requires a larger amount of disk space and takes longer to print.

Toner saving

Uses less toner when printing your document. This is best suited to draft text documents as it lightens the print significantly.

Page rotate

Select Page rotate to turn the text and images 180 degrees and point them across the length of the page.

Adjust ultra fine lines

If you are printing a drawing and want to emphasize the pen width of very fine lines, select this option to improve the appearance of the lines. However, in some applications, if this options is selected and you are printing barcodes, the spaces in the barcode becomes too narrow. De-selecting this option resolves this problem.

Summary

This option displays a summary of all selected print options for the current job.

CANCELLING A PRINT JOB

You can cancel a print job from your software application, from the print queue or by using the STOP button on your printer.

PRINTING STATE	HOW TO CANCEL
Document has not started printing	Try to cancel printing job within software application
Document is waiting in a print queue	Delete print job from Print Queue. You can access the print queue from the System Tray in Windows or the Print Center Queue in Mac.
Document has started printing	Press the **STOP** button on your printer. Any pages that are already moving through the printer will be printed. You will need to press **STOP** for each print job you wish to stop.

Overlays and Macros (Windows only)

What are overlays and macros?

If you would like to print on special stationery, such as forms and letterhead, but do not want to use pre-printed stationery, you can create your own using these advanced features.

You can use PostScript overlays to generate all your special stationery and store it in the printer for use whenever you need it. If you have chosen to install the PCL driver, macros perform a similar function.

You can create several overlays or macros, and combine them in any way you like to produce a variety of forms and other special stationery. Each image can be printed on just the first page of a document, on all pages, on alternate pages, or just the pages that you specify.

Creating PostScript overlays

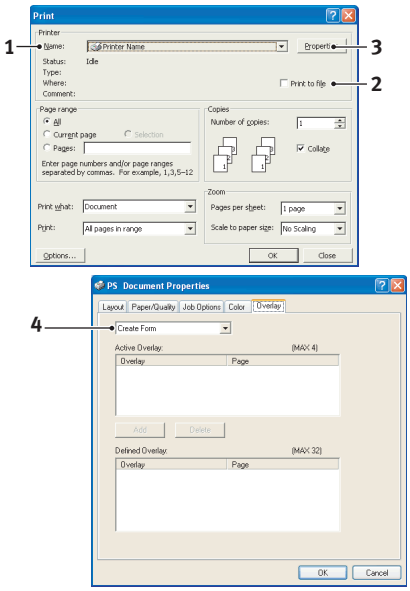
Three steps are required to create an overlay:

1. Create the form data using your own application software and print it to a printer (.PRN) file.
2. Use the Storage Device Manager utility software supplied on CD with your printer to create a "project file," import the.PRN file(s), and download the generated filter (.HST) file to the printer. The project file will contain one or more overlay images which are functionally related, such as the cover page and the continuation page images for business letters.
3. Use downloaded files to define your overlays ready for use when printing your documents.

When printing overlay files to disk, do not select any special features, such as two-sided printing or multiple copies. These are not appropriate to overlays, they apply only to your final documents.

Creating the overlay image

1. Use your preferred application, perhaps a graphics program, to create the required overlay image and save it.
2. Open your application's **Print...** dialogue.
3. Make sure that the selected printer name (1) is that of your PostScript printer driver.
4. Select the **Print To File** (2) option.
5. Click the **Properties** button (3) to open the Document Properties window.
6. On the **Overlay** tab, choose **Create Form** from the drop-down list (4).
7. Click **OK** to close the Document Properties window.
8. Click **OK** again to close the Print dialogue.
9. When prompted for a print file name, enter a meaningful name with the extension.PRN.
10. Close your application.



CREATE AND DOWNLOAD THE PROJECT

1. From the Windows **Start** menu, start **Storage Device Manager** (SDM) and allow SDM to discover the printer.
2. Choose **Projects→New Project**.
3. Choose **Projects→Add File to Project**.
4. Set the **Files of Type** drop-down list to **PRN Files(*.prn)**.
5. Navigate to the folder where the.PRN files are stored and select one or more of these to include in your overlay set.

   You can have more than one printer (.PRN) file in a project. For example, one for top pages and another for continuation pages. Use standard Windows techniques (Shift or Ctrl keys) to select multiple files simultaneously if you need to.
6. Click **Open** to add these files to the current project.
7. When a message box appears confirming that a filter file has been created, click **OK** to clear the message.
8. The project window will display one.HST file for each printer file added. Make a careful note of each of these names. Ensure that you note them *exactly* as they appear, they are case sensitive, and you will need them later.
9. Choose **Projects→Save Project** and enter a meaningful name (e.g. "Letter Stationery") so that you can recognise it later if you want to modify it.
10. Choose **Projects→Send Project Files to Printer** to download the project to the printer.

    If you have a hard disk in the printer, SDM will automatically download files to it. If not, SDM will download files to flash memory. If you have a hard disk but still prefer to download to flash memory, double-click the file name in the Project window and under **Volume**, type in **%Flash0%** and then click **OK**.
11. When the message "Command Issued" appears confirming that the download is complete, click **OK** to clear the message.

TEST PRINTING THE OVERLAY

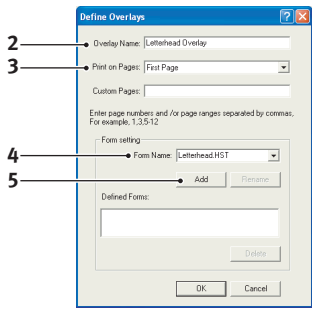
1. Click on the printer icon for the relevant printer and choose **Printers→Test Form**.
2. In the Test PostScript Form window, to test each overlay select it and click **OK**. There will be a short pause while the printer processes the form, and then it will print.
3. When each overlay has been tested, click **Exit**.
4. Click the standard Windows **Close (X)** button, or choose **Projects→Exit** to close Storage Device Manager.

DEFINING OVERLAYS

This is the final step before the new overlays are ready for use.

1. Open the Printers (called "Printers and Faxes" in Windows XP) window via the **Start** menu or the Windows Control Panel.
2. Right-click on the Relevant PostScript printer icon and choose **Printing Preferences** from the pop-up menu.
3. On the **Overlay** tab, click the **New** button.

4. In the **Define Overlays** window, enter a suitable name (2) for this overlay and choose which page(s) (3) of your documents will use this overlay.



5. Enter the name of the overlay file (4) *exactly* as it appeared in the Storage Device Manager project window. Remember that this name is case sensitive.

   If you forgot to note the overlay names when you created them, you can find them using Storage Device Manager to view the project file, or the printer's Information Menu to print a file list and identify them from there.

6. Click **Add** (5) to add this overlay into the defined overlays list.

7. Click **OK** to close the Define Overlay window.

   The new overlay now appears in the Defined Overlays list in the printer properties window.

8. Repeat the above procedure if you wish to define more overlays.

9. When done, click **OK** to close the printer properties window.

Your new overlays are now ready and available to be used for any future documents you wish.

PRINTING WITH POSTSCRIPT OVERLAYS

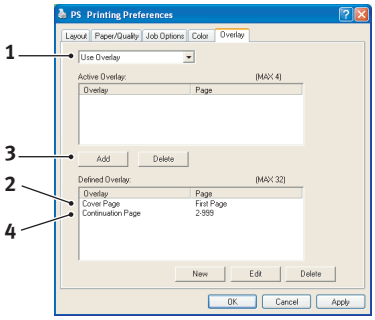
Once you have defined your overlays you are ready to use them for any documents you wish. The example illustrated here uses two overlays for business letters. The first prints on just the top page, and the second prints on any or all subsequent pages.

1. Prepare your document in the normal way using your own application software. Remember, if necessary, to format the document so that it will fit within the appropriate space.

2. Open your application's **Print...** dialogue and choose any options you will require, ensuring that the target printer is your PostScript printer driver in which the overlays have been defined.

3. Click the **Properties** button to open the Printing Preferences window.

4. On the **Overlays** tab, choose **Use Overlay** from the drop-down list (1).



5. Click on the first overlay (2) you wish to use. In this example it is the Cover Page overlay. Then click the **Add** button (3).

6. If you want to use another overlay, in this case it is the Continuation page, click the second overlay (4) and then click the **Add** button (3) again.

7. When you have selected all the overlays you want to use for this document, click **OK**.

8. Finally, in your application's print dialogue, click **OK** to begin printing.

CREATING PCL OVERLAYS

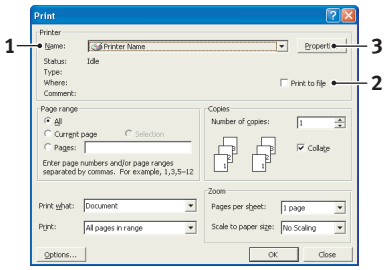
Three steps are required to create an overlay:

1. Create the form data using your own application software and print it to a printer (.PRN) file.
2. Use the Storage Device Manager utility software supplied on CD with your printer to create a "project file," import the .PRN file, and download the generated filter (.BIN) files to the printer.
3. Use downloaded files to define your overlay ready for use with any future document.

   When printing files to disk, do not select any special features, such as two-sided printing or multiple copies. These are not appropriate to macros, they apply only to your final documents.

CREATING THE OVERLAY IMAGE

1. Use your preferred application, perhaps a graphics program, to create the required image and save it.
2. Open your application's **Print...** dialogue.
3. Make sure that the selected printer name (1) is that of your PCL printer driver.
4. Select the **Print To File** (2) option.
5. When prompted for a print file name, enter a meaningful name with the extension .PRN .
6. Close your application.



CREATE AND DOWNLOAD MACROS

1. From the Windows **Start** menu, start **Storage Device Manager** (SDM) and allow SDM to discover the printer.
2. Choose **Projects→New Project** to start a new project.
3. Choose **Projects→Filter Macro File**. The Filter Printer Patterns dialogue box appears. Make any adjustments in the settings that you need and then click **OK**.

   Example: If you create a black oval in MS Paint and leave all the colour command filters checked, the black oval will print as a black rectangle when the overlay is used. To maintain the oval shape, turn off (deselect) the "Configure Image Data," "Palette ID" and "Palette Control" filters.
4. Set the **Files of Type** drop-down list to **PRN Files(*.prn)**.
5. Navigate to the folder where the overlay .PRN files are stored and select one or more of these to include in your overlay set.

   You can have more than one macro file in a project. For example, one for top pages and another for continuation pages. Use standard Windows techniques (Shift or Ctrl keys) to select multiple files simultaneously if you need to.
6. Click **Open** to add these files to the current project. (You can also drag and drop files from Windows Explorer directly into the project window if you prefer.) When a message box appears confirming that a filter file has been created, click **OK** to clear the message.
7. The project window will display one .BIN file for each printer file added. Make a careful note of the name and ID number for each of the files. You will need them later.

If you wish to edit the names or ID numbers, double-click the file entry and edit the details.

Note that the names are case sensitive.

8. Choose **Projects→Save Project** and enter a meaningful name (e.g. "Letter Stationery") so that you can recognise it.
9. Choose **Projects→Send Project Files to Printer** to download the project to the printer.
10. When the message "Command Issued" appears confirming that the download is complete, click **OK** to clear the message.

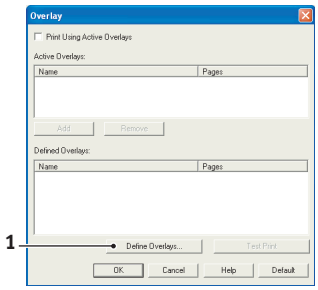
TEST PRINTING THE MACRO

1. Choose **Printers→Test Macro**.
2. In the Test Macro window, enter its ID number and click **OK**. After a short pause the printer will print the macro.
3. When each macro has been tested, click **Exit**.
4. Click the standard Windows **Close (X)** button, or choose **Projects→Exit** to close Storage Device Manager.

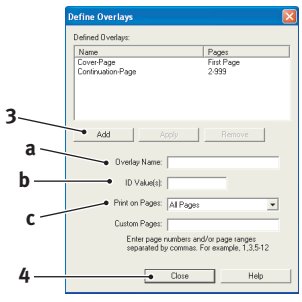
DEFINING OVERLAYS

This is the final step before the new overlays are ready for use.

1. Open the Printers (called "Printers and Faxes" in Windows XP) window via the **Start** menu or the Windows Control Panel.
2. Right-click on the Relevant PostScript printer icon and choose **Printing Preferences** from the pop-up menu.
3. On the **Job Options** tab, click the **Overlay** button.
4. In the Overlay window, Click the **Define Overlays button** (1).



5. In the Define Overlays window, enter the **name** (a) and **I**D (b) of the required overlay, and define which **page(s)** (c) of your documents will use this overlay. Then click the **Add button** (3) to add this overlay to the list of defined overlays. Repeat for any other related overlays. When done, click the **Close button** (4) to close the window.



The example illustrated shows two overlays defined, one for a cover page and one for continuation pages.

Remember that names and IDs of overlay files must be entered *exactly* as they appeared in the Storage Device Manager project window. Remember also that names are case sensitive.

If you forgot to note the overlay name or ID when you created them, you can find them using Storage Device Manager to view the project file, or the printer's Information Menu to print a file list and identify them from there.

The new overlays will now appear in the Defined Overlays list in the printer properties window.

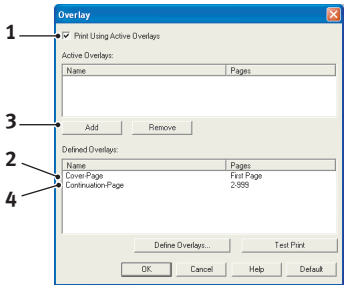
6. When done, click **OK** to close the printing preferences window.

Your new overlays are now ready and available to be used for any future documents you wish.

PRINTING WITH PCL OVERLAYS

Once you have defined your overlays you are ready to use them for any documents you wish. The example illustrated here uses two overlays for business letters. The first prints on just the top page, and the second prints on any or all subsequent pages.

1. Prepare your document in the normal way using your own application software. Remember, if necessary, to format the document so that it will fit nicely within the plain areas on your letterhead overlay.
2. Open your application's **Print...** dialogue and choose any options you will require, ensuring that the target printer is your PCL printer driver in which the overlays have been defined.
3. Click the **Properties** button to open the Printing Preferences window.
4. On the **Overlay** tab, check the **Use active overlays** checkbox (1).
5. In the Defined Overlays list, click on the first overlay (2) you wish to use, and click the **Add** button (3) to add it to the Active Overlays list. (If you want a reminder of how this overlay looks, click the **Test Print** button.)



6. If you want to use another overlay with this document, in this example it is the "Continuation Page" overlay, click this overlay (4) in the list of defined overlays, and then click the **Add** button (3) again to add the second overlay to the list of active overlays.
7. When the list of active overlays contains all the items you want to use, click **OK**.
8. Finally, click the **Print** button in your application's Print dialogue to begin printing your document.

MAINTENANCE

CONSUMABLE LIFE EXPECTANCY

NOTE
When the on-screen display indicates that the toner is low, or if print appears faded, first open the top cover and try tapping the cartridge a few times to evenly distribute the toner powder. This will enable you to obtain the best "yield" from your toner cartridge.

As a guide, the life expectancy of these items is:

> **Toner**

Starter cartridge:

The machine is shipped with sufficient black toner for 1500 sheets (ISO/IEC19752 A4).

Replacement cartridge:

3.5k cartridge has a capacity of approximately 3,500 sheets (ISO/IEC19752 A4). If the image drum is also replaced at the same time the capacity is approximately 1,750 sheets (ISO/IEC19752 A4).

7k cartridge has a capacity of approximately 7,000 sheets (ISO/IEC19752 A4).If the image drum is also replaced at the same time the capacity is approximately 5,250 sheets (ISO/IEC19752 A4).

12k cartridge has a capacity of approximately 12000 sheets (ISO/IEC19752 A4).If the image drum is also replaced at the same time the capacity is approximately 10,250 sheets (ISO/IEC19752 A4).

> **Image drum:**

Simplex printing on A4 paper yields:

> 50,000 pages (approx.) for continuous printing

> 40,000 pages (approx.) for 3 pages per job (without power save)

> 24,000 pages (approx.) for 1 page per job (without power save)

> 14,000 pages (approx.) for 1 page per job (with power save)

> Duplex printing on A4 paper yields:

> 15,000 pages (approx.) for continuous printing (without power save)

> 13,000 pages (approx.) for 6 page per job (without power save)

> 10,000 pages (approx.) for 2 page per job (without power save)

As the lifetime of the cartridge is proportional to the number of drum rotations, simplex printing on A4/Letter paper with area coverage rate at 5% yields:

> 15,000 images for 3 page per job

> 9,000 images for 1 page per job

CONSUMABLE ORDER DETAILS

ITEM	LIFE	ORDER NO.
Toner standard - MB460, MB470, MB480	3,500 A4@ ISO/IEC19752	43979102 (EU only) 43979107 (non-EU)
Toner high capacity - MB460, MB470, MB480	7,000 A4@ ISO/IEC19752	43979202 (EU only) 43979211 (non-EU)
Toner high capacity - MB480	12,000 A4@ ISO/IEC19752	43979216 (EU only) 43979218 (non-EU)
Image Drum	25,000 A4 pages	43979002

Only use genuine original consumables to ensure the best quality and performance from your hardware. Non original products may adversely affect your printer's performance and invalidate your warranty.

REPLACING CONSUMABLE ITEMS

TONER CARTRIDGE REPLACEMENT

CAUTION!

To avoid toner wastage and possible toner sensor errors, do not change the toner cartridge until "TONER EMPTY" is displayed.

The toner used in this machine is a very fine dry powder. It is contained in one cartridge.

Have a sheet of paper handy so that you have somewhere to place the used cartridge while you install the new one.

Dispose of the old cartridge responsibly, inside the pack that the new one came in. Follow any regulations, recommendations, etc., which may be in force concerning waste recycling.

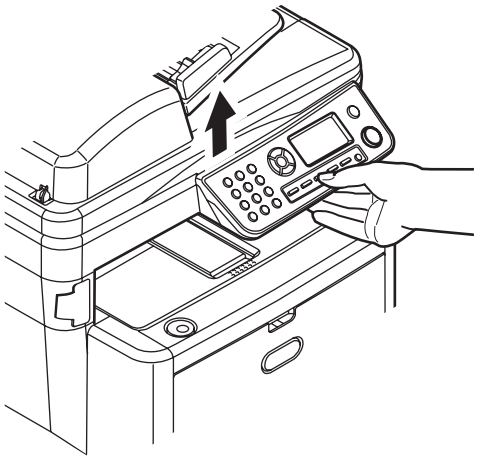
If you do spill any toner powder, lightly brush it off. If this is not enough, use a cool, damp cloth to remove any residue.

Do not use hot water, and NEVER use solvents of any kind. They will make stains permanent.

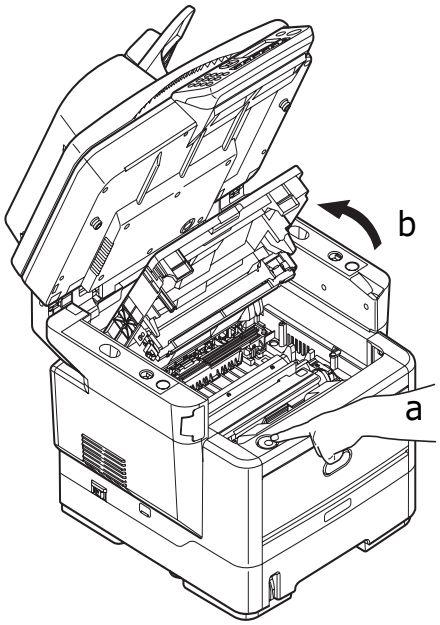
WARNING!

If you inhale any toner or get it in your eyes, drink a little water or bathe your eyes liberally in cold water. Seek medical attention immediately.

1. Lift the Scanner.



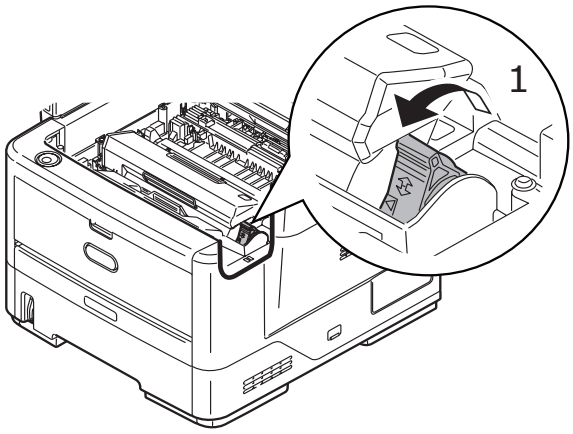
2. Press the cover release (a) and open the top cover (b) fully.



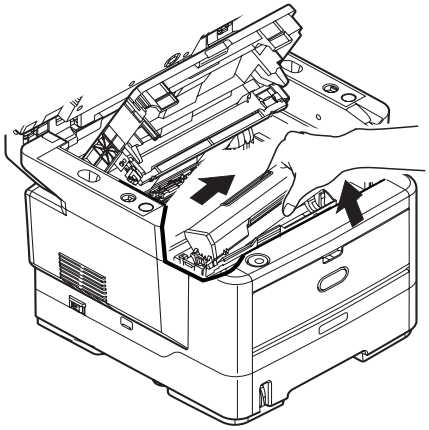
WARNING!

If the MFP has been powered on, the fuser may be hot. This area is clearly labelled. Do not touch.

3. Pull the coloured toner release lever (1) on the cartridge to be replaced fully towards the front of the MFP.



4. Lift the right-hand end of the cartridge and then draw the cartridge to the right to release the left-hand end as shown, and withdraw the toner cartridge out of the MFP.



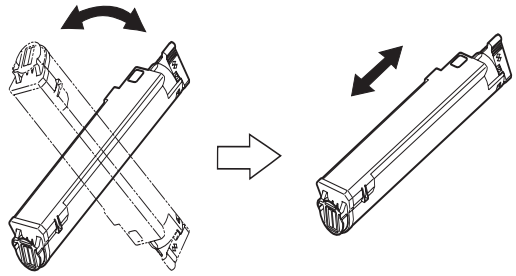
5. Put the cartridge down gently onto a piece of paper to prevent toner from marking your furniture.

CAUTION!

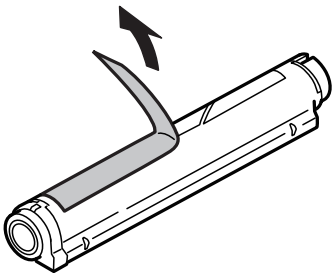
The green image drum surface is very delicate and light sensitive. Do not touch it and do not expose it to normal room light for more than 5 minutes. If the toner cartridges need to be out of the MFP for longer than this, please lower the top cover. Never expose the drum to direct sunlight or very bright room lighting.

6. Remove the new cartridge from its box but leave its wrapping material in place for the moment.

7. Gently shake the new cartridge from end to end several times to loosen and distribute the toner evenly inside the cartridge.

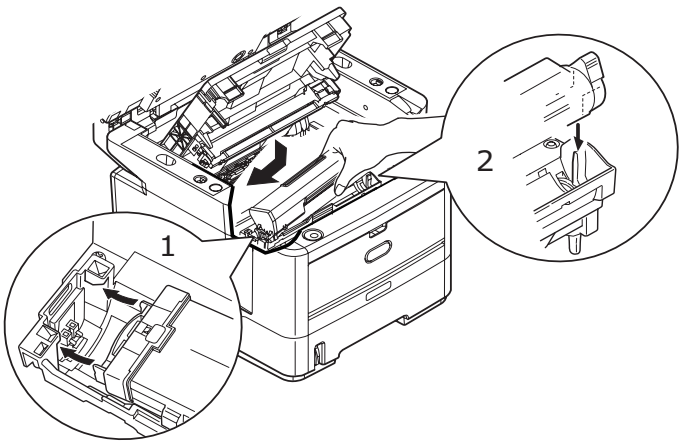


8. Remove the wrapping material and peel off the adhesive tape from the underside of the cartridge.

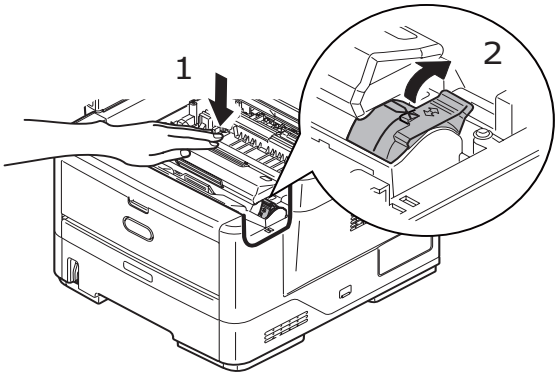


9. Holding the cartridge by its top centre with the coloured lever to the right, lower it into the printer over the image drum unit from which the old cartridge was removed.

10. Insert the left end of the cartridge into the top of the image drum unit first, pushing it against the pins on the drum unit, then lower the right end of the cartridge down onto the image drum unit.



11. Pressing gently down on the cartridge to ensure that it is firmly seated, push the coloured lever towards the rear of the MFP. This will lock the cartridge into place and release toner into the image drum unit.



12. Close the top cover and press down firmly so that the cover latches closed.

13. Gently lower the scanner.

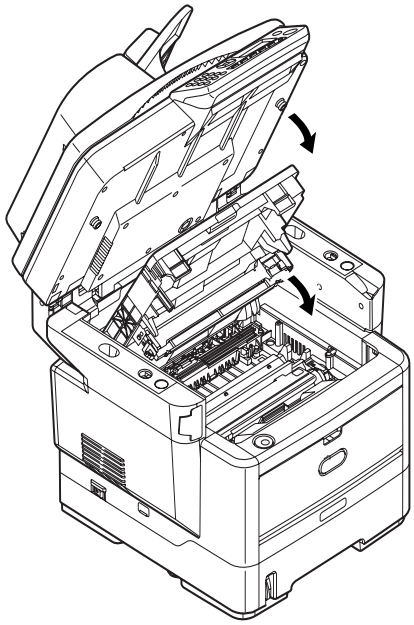
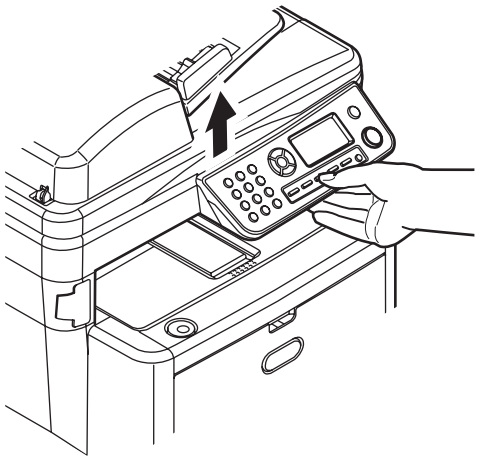


IMAGE DRUM REPLACEMENT

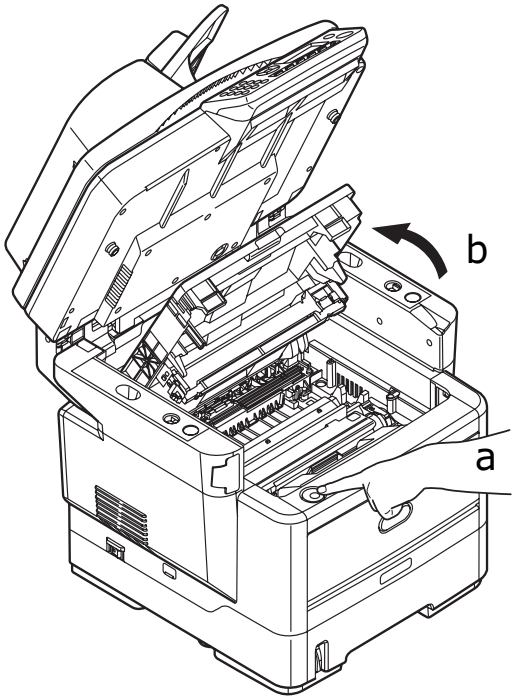
CAUTION!

Static sensitive devices, handle with care.

1. Lift the scanner.



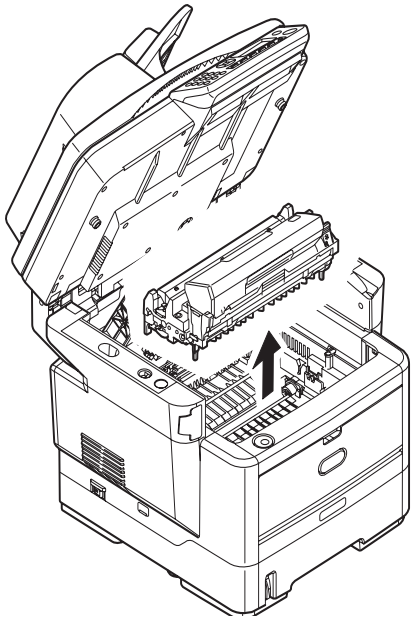
2. Press the cover release (a) and open the top cover (b) fully.



WARNING!

If the MFP has been powered on, the fuser will be hot. This area is clearly labelled. Do not touch.

3. Holding it by its top centre, lift the image drum, complete with its toner cartridge, up and out of the MFP.



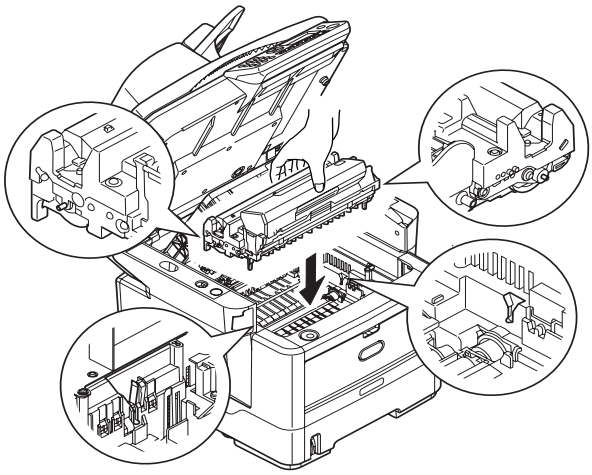
4. Put the cartridge down gently onto a piece of paper to prevent toner from marking your furniture and to avoid damaging the green drum surface.

CAUTION!

The green image drum surface at the base of the cartridge is very delicate and light sensitive. Do not touch it and do not expose it to normal room light for more than 5 minutes. If the drum unit needs to be out of the MFP for longer than this, please wrap the cartridge inside a black plastic bag to keep it away from light. Never expose the drum to direct sunlight or very bright room lighting.

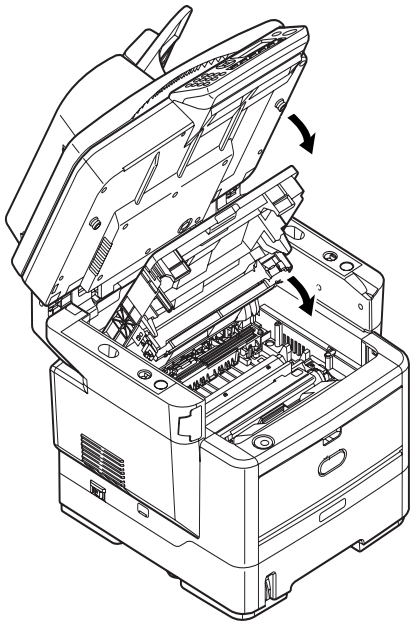
5. With the coloured toner release lever to the right, pull the lever towards you. This will release the bond between the toner cartridge and the image drum cartridge.
6. Lift the right-hand end of the cartridge and then draw the cartridge to the right to release the left-hand end as shown, and withdraw the toner cartridge out of the image drum cartridge. Place the cartridge on a piece of paper to avoid marking your furniture.
7. Take the new image drum cartridge out of its packaging and place it on the piece of paper where the old cartridge was placed. Keep it the same way round as the old unit. Pack the old cartridge inside the packaging material for disposal.
8. Place the toner cartridge onto the new image drum cartridge as shown. Push the left end in first, and then lower the right end in. (It is not necessary to fit a new toner cartridge at this time unless the remaining toner level is very low.)
9. Push the coloured release lever away from you to lock the toner cartridge onto the new image drum unit and release toner into it.

10. Holding the complete assembly by its top centre, lower it into place in the MFP, locating the pegs at each end into their slots in the sides of the MFP cavity.



11. Close the top cover and press down firmly so that the cover latches closed.

12. Gently lower the scanner.



NOTE
If you need to return or transport this product for any reason, please make sure you remove the image drum unit beforehand and place in the bag provided. This is to avoid toner spillage. Refer to "Appendix A - Moving and transporting" on page 137 for details.

CLEANING

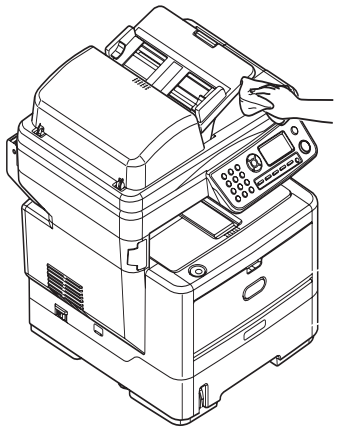
From time to time print "debris" such as ink, toner and paper dust will accumulate in the ADF and the document glass from documents which have been copied.

CAUTION!

Use a clean, moist, lint-free cloth for cleaning. Do not use benzine, thinners or alcohol as a cleaning agent.

...THE UNIT CASING

1. Switch off the MFP.
2. Wipe the unit surface with a soft cloth moistened sparingly with water or neutral detergent.

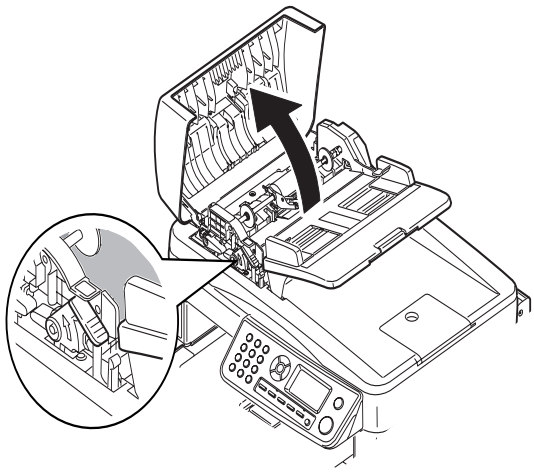


3. Use a soft dry cloth to dry the unit surface.
4. Turn on the MFP.

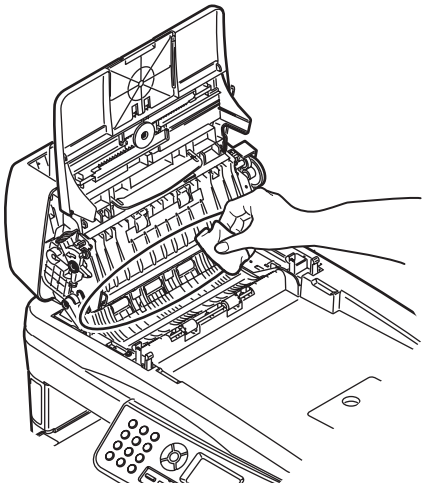
...THE PAPER PATH IN THE ADF

If marks are found on an image, which has been read by the ADF, or the ADF does not feed documents smoothly, follow the cleaning procedure below.

1. Switch the MFP OFF.
2. Open the ADF top cover.
3. Pinch the ADF lock lever and swing the feeder mechanism up until it is locked.



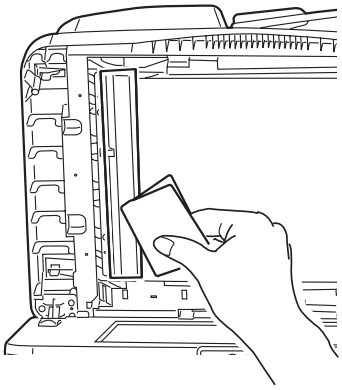
4. Moisten a soft clean lint free cloth and remove any marks by wiping the cloth in the direction of the arrow, as shown.



5. Return the feeder mechanism to its original position.
6. Close the ADF top cover.

... THE UNDERSIDE OF THE ADF

1. Open the document cover.



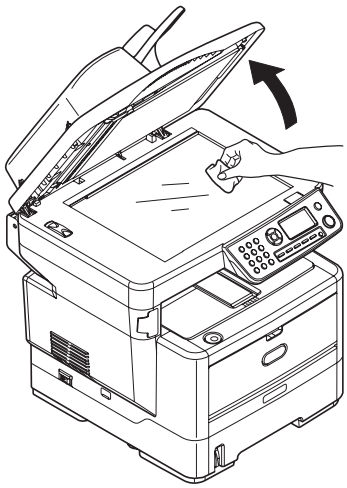
2. Moisten a soft, clean, lint free cloth and remove any marks as shown.
3. Close the document cover.

...THE DOCUMENT GLASS

The document glass needs to be cleaned occasionally to ensure optimum image quality and performance.

Clean the glass as follows.

1. Open the document cover.



2. Moisten a soft, clean, lint-free cloth and remove any marks, as shown.

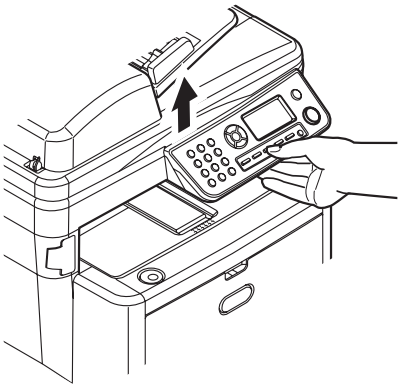
3. Close the document cover.

...THE LED HEAD

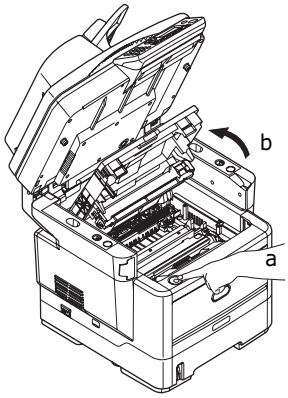
Clean the LED head when printing does not come out clearly, has white lines or when text is blurred.

There is no need to switch the MFP off to clean the lens.

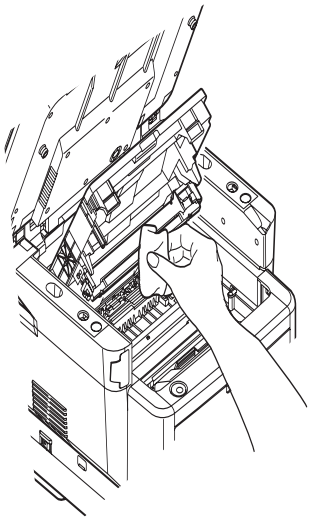
1. Lift the scanner.



2. Press the cover release (a) and open the top cover (b) fully.



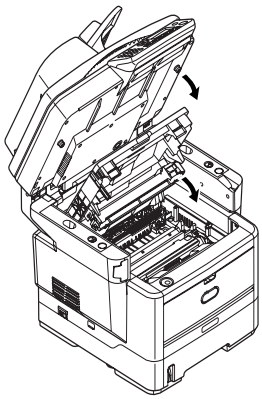
3. Moisten a soft, clean, lint-free cloth and gently wipe the LED head surface.



CAUTION!

Do not use methyl alcohol or other solvents on the LED head as damage to the lens surface will occur.

4. Close the top cover and press down firmly so that the cover latches closed.
5. Gently lower the scanner.



INSTALLING OPTIONS

The following options are available to extend the performance of your printer:

> 64, 256 RAM DIMM: to extend the main memory of your printer and speed up the processing of large files.

> Second paper tray: to increase your printer's paper handling capacity by 530 sheets (75g/m2)

INSTALLING OPTIONS ORDER NUMBERS

OPTIONS	ORDER NUMBER
64MB RAM DIMM	44029504
256MB RAM DIMM	44029509
Second Paper Tray	43990707

INSTALLATION PROCEDURE

To install any of the above options, follow the detailed installation sheet that accompanies the option.

TROUBLESHOOTING

CLEARING PAPER JAMS

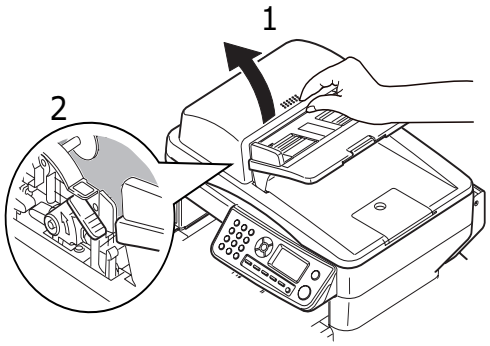
Provided that you follow the recommendations in this guide on use of print media, and you keep the media in good condition prior to use, your MFP should give years of reliable service. However, paper jams occasionally do occur, and this section explains how to clear them quickly and simply.

Jams can occur due to paper misfeeding from a paper tray or at any point on the paper path through the printer or scanner ADF. When a jam occurs, the MFP immediately stops. If printing multiple pages (or copies), do not assume that, having cleared an obvious sheet, others will not also be stopped somewhere along the path. These must also be removed in order to clear the jam fully and restore normal operation.

IN THE SCANNER ADF SECTION...

In the event of a paper jam, follow the procedures below to remove the paper:

1. Lift the ADF cover (1).

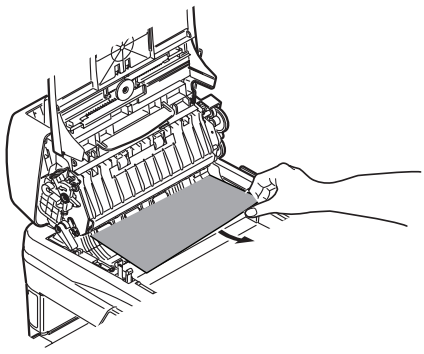


2. Remove any loose paper from the entry to the sheet feeder.

3. If there is any paper trapped in the feed mechanism:

(a) Lift the feeder mechanism by the coloured tab (2).

(b) Remove any paper from ADF mechanism.

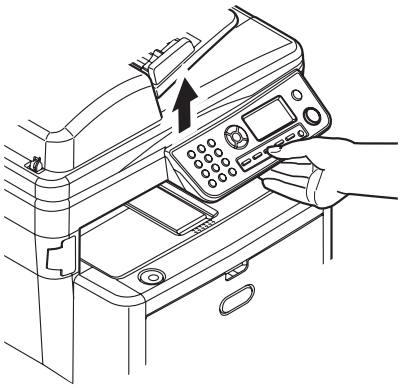


4. Lower the ADF cover.

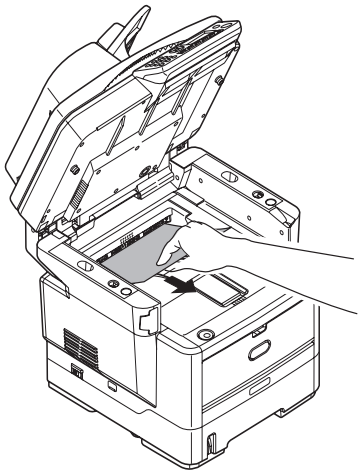
5. Press the Stop button to restore the scanning head to the correct position.

IN THE PRINTER SECTION...

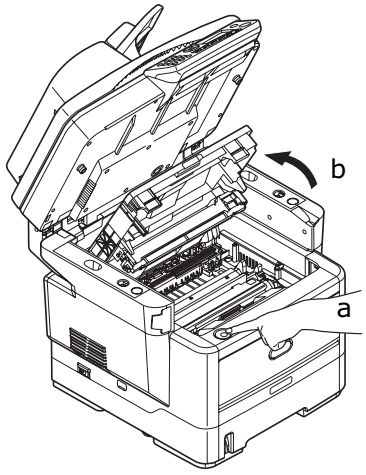
1. Lift the scanner.



2. If a sheet is well advanced out of the top of the printer, simply grip it and pull gently to draw it fully out. If it does not remove easily, do not use excessive force. It can be removed from the rear later.



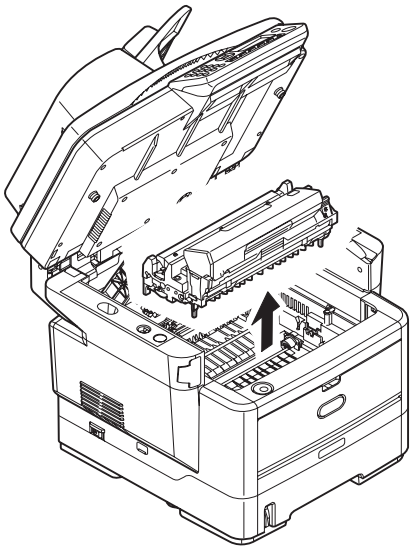
3. Press the cover release (a) and open the MFP's top cover (b) fully.



WARNING!

If the MFP has been powered on, the fuser will be hot. This area is clearly labelled. Do not touch.

4. Holding it by its top centre, lift the image drum, complete with its toner cartridge, up and out of the printer.

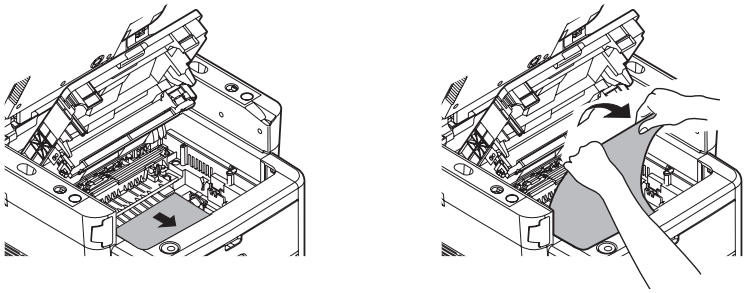


5. Put the cartridge down gently onto a piece of paper to prevent toner from marking your furniture and to avoid damaging the green drum surface.

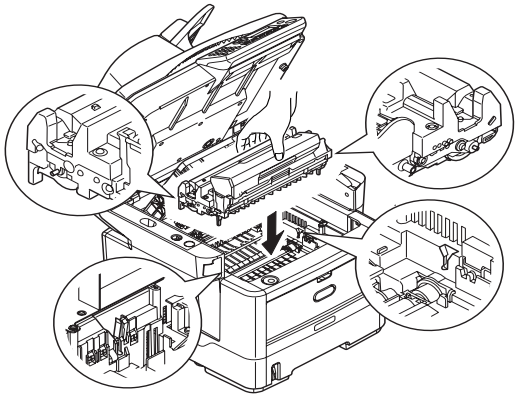
CAUTION!

The green image drum surface at the base of the cartridge is very delicate and light sensitive. Do not touch it and do not expose it to normal room light for more than 5 minutes. If the drum unit needs to be out of the MFP for longer than this, please wrap the cartridge inside a black plastic bag to keep it away from light. Never expose the drum to direct sunlight or very bright room lighting.

6. Remove any jammed sheets from the paper path.



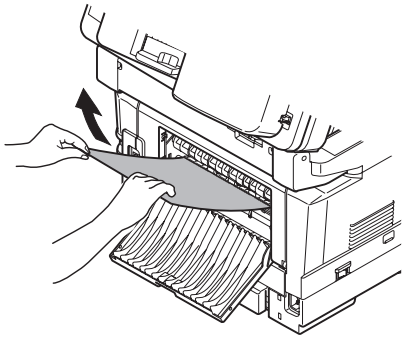
7. Holding the complete assembly by its top centre, lower it into place in the MFP, locating the pegs at each end into their slots in the sides of the MFP cavity.



8. Lower the top cover but do not press down to latch it closed yet. This will protect the drums from excessive exposure to room lighting while you check the remaining areas for jammed sheets.

9. Open the rear cover and check for a sheet of paper in the rear path area.

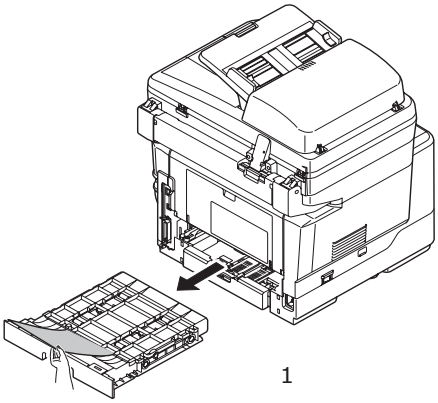
Pull out any sheets found in this area.



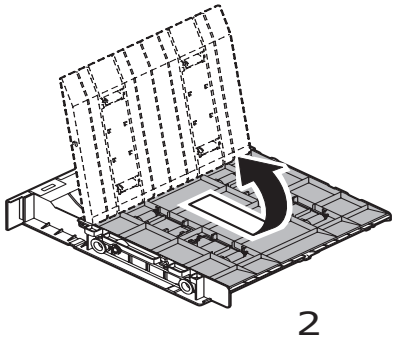
If the sheet is low down in this area and difficult to remove, it is probably still gripped by the fuser. In this case raise the top cover, reach around and press down on the fuser pressure release lever.

10. If you are not using the rear exit tray, close it once paper has been removed from this area.

11. Remove the Duplex Unit (1) and check for any paper in this area. Remove any paper and replace the duplex unit..



1



2

NOTE
If the paper is not advanced enough to grip, push the cover (2) in the arrow direction, raise it and remove the paper. Refit duplex unit.

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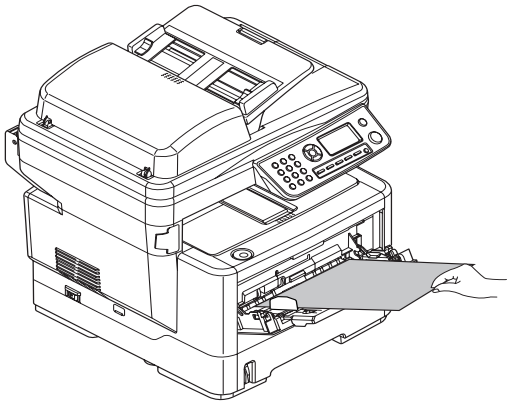
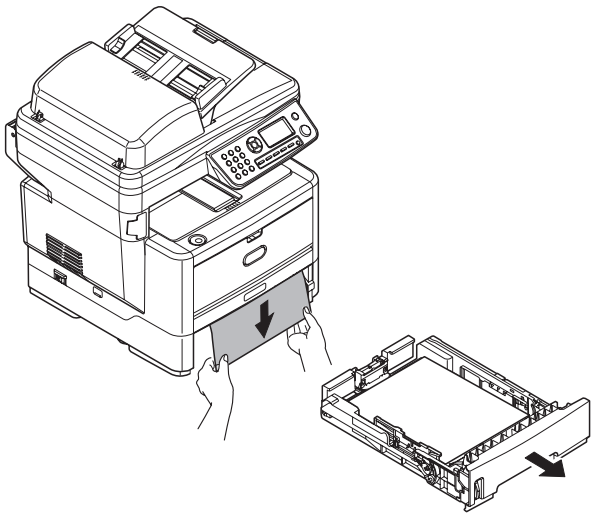
12. Open the Multi Purpose Tray.

Remove any paper that you find and then close the tray.

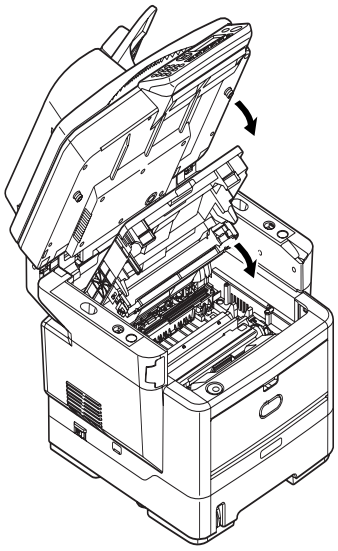


13. Pull out the paper tray and remove any paper from the underside of the printer. Ensure that all paper is stacked properly, is undamaged, and that the paper guides are properly positioned against the edges of the paper stack. When satisfied, replace the tray.



14. Close the top cover and press down firmly at both sides so that the cover latches closed.

15. Gently lower the scanner.



DEALING WITH UNSATISFACTORY PRINTING

SYMPTOMS	POSSIBLE CAUSES	STEPS TO TAKE
Vertical white lines can be seen on the printed page.	The LED head is dirty.	Wipe the LED head with a soft, lint-free cloth.
	The toner is low.	Open the top cover and tap the cartridge a few times to evenly distribute any remaining toner. If symptoms persist, replace the toner cartridge.
	Foreign materials may be present in the image drum.	Replace the image drum cartridge.
	Light-shielding film of the image drum cartridge is dirty.	Wipe the film with a soft, lint-free cloth.
Printed images are fading vertically.	The LED head is dirty.	Wipe the LED head with a soft, lint-free cloth.
	The toner is low.	Open the top cover and tap the cartridge a few times to evenly distribute any remaining toner. If symptoms persist, replace the toner cartridge.
	The paper is not suitable for the printer unit.	Use recommended paper.
Printing is light.	The toner cartridge is not properly seated.	Reinstall the toner cartridge.
	The toner is low.	Open the top cover and tap the cartridge a few times to evenly distribute any remaining toner. If symptoms persist, replace the toner cartridge.
	The paper is moist.	Use paper stored in proper temperature and humidity conditions.
	The paper is not suitable for the printer unit.	Use recommended paper.
	Thickness and type of paper are inappropriate.	Set a proper value for Media Weight and Media Type in the Paper Setup menu, or set one value thicker for Media Weight.
	Recycled paper is being used.	Set one value thicker for Media Weight in the Paper Setup menu.
Partially faded images. White spots and lines appear in solid printing.	Paper is moist or dry.	Use paper stored in proper temperature and humidity conditions.

SYMPTOMS	POSSIBLE CAUSES	STEPS TO TAKE
Vertical lines appear.	The image drum cartridge is damaged.	Replace the image drum cartridge.
	The toner is low.	Open the top cover and tap the cartridge a few times to evenly distribute any remaining toner. If symptoms persist, replace the toner cartridge.
Horizontal Lines and spots appear periodically.	When the interval is about 94mm (4in), the image drum (the green tube) is damaged or dirty.	Wipe it lightly with a soft cloth. Replace the image drum cartridge when it is damaged.
	When the interval is about 42mm (1.5in), there may be foreign particles in the image drum cartridge.	Open/close the top cover, and print again.
	When the interval is about 87mm (3.5in), the fuser unit is damaged.	Replace the fuser unit.
	The image drum cartridge has been exposed to light.	Replace the image drum cartridge if the problem is not resolved.
White area of paper is lightly stained.	Paper contains static.	Use paper stored in proper temperature and humidity conditions.
	Too thick paper is used.	Use thinner paper.
	The toner is low.	Open the top cover and tap the cartridge a few times to evenly distribute any remaining toner. If symptoms persist, replace the toner cartridge.
Periphery of the letters is smudged.	The LED head is dirty.	Wipe the LED head with a soft, lint-free cloth.
Toner comes off when it is rubbed.	The thickness and type of the paper are incorrectly set.	Set the correct value of Media Type and Media Weight in the Printer menu or set one value thicker for Media Weight.
	Recycled paper is used.	Set one value thicker for Media Weight in the Printer menu.
Glossiness is not uniform.	The thickness and type of the paper are incorrectly set.	Set the correct value of Media Type and Media Weight in the Printer menu or set one value lighter for Media Weight.

DEALING WITH UNSATISFACTORY COPYING

As well as the suggestions provided in "Dealing with unsatisfactory printing" on page 128, ensure that the scanner unit glass is clean at all times. Refer to "...the document glass" on page 119.

FAX PROBLEM CHECKLIST (MB470/MB480)

If a problem occurs, read through the list of problems and solutions before calling for service.

The MFP will not dial a telephone number. Check the power cable and wall outlet. Make sure that the telephone line (not external telephone or handset) is connected to the LINE socket on the back of the machine. If an external telephone is installed, lift the handset and check for a dial tone. If there is no dial tone, there may be a problem with the telephone line. If there is a dial tone, the MFP may be using the wrong dialling method (pulse or tone) for the region. If alternating tones are heard instead of dialling pulses and the region uses pulse dialling, change the call parameters (see "MF(Tone)/DP(Pulse)" on page 45).

The display shows a communications error. This indicates any of a number of problems:

- The MFP may be incompatible with the remote machine, or the remote machine may not be able to perform the function requested of it such as polling or confidential faxing.
- The remote machine may also be out of paper or experiencing a paper jam.
- Bad telephone line conditions can also cause communication errors. Try sending the fax again and check to make sure that the correct telephone number is being dialled.
- If a prefix number must be dialled to get an outside line, or if the call is to an international destination, a pause may need to be entered after the dial prefix or international dialling code to tell the machine to wait for a dial tone. If there are frequent problems communicating with a particular remote machine, try programming the telephone number into a speed dial key, and then change the parameters for that key.
- Lastly, either the local or remote machine may require servicing. Try sending a fax to another location to check the local MFP.

Faxing is possible but the image of the document printed by the remote machine is very poor. If the faxed document has small type, complex illustrations, photos, or is very light or very dark, try changing the fax quality and density settings (see "Density" on page 40). Copy the document on the machine to determine how it will transmit. The problem may be caused by telephone line interference. Try sending the document again later.

Fax sent but received message was completely blank. Make sure that the document is loaded correctly before faxing; with text face UP in the ADF or face DOWN on the glass.

Image of received fax is very poor. Try making a copy of a document on the local machine to make sure it is working properly. If there is still a problem, contact the person sending the fax and ask them to change their fax quality and density settings. Ask the person to make a copy of the document on their machine to ensure that it is working properly. Then ask them to send the fax again.

Dialling was tried with a Speed Dial/ Group Dial number but nothing happened. Make sure that the Speed Dial/ Group Dial number being used is programmed correctly.When dialling a two or three digit number, be sure press # or * before entering the number.

Documents received are light or have vertical streaks on them, and MFP is not out of toner. Lift the top cover and gently wipe the lens surface of the MFP's LED array. Then check to see if the toner or image drum need replacing (see "Replacing consumable items" on page 110).

MFP is set for delayed transmission but it did not send. Check the display to make sure that the MFP is set to the correct time and date (see "Clock Adjustment" on page 44).

MFP is connected to a PBX but it is not possible to dial out. Be certain that the dial prefix is entered before the telephone number for each number dialled or programmed into

the machine. Additionally, the machine must be programmed for PBX operation before it will work with a PBX (see “Connecting to a PBX” on page 52).

MFP always answers before it is possible to use the external telephone. If an external telephone is connected, change the MFP’s ring response setting (“Ring Response” on page 45).

Faxes received sometimes look distorted. If the document received is wider or longer than the paper loaded in the paper tray, the machine automatically reduces the width or length of the document so that it will fit on the paper. This type of problem could also be communication related.

SPECIFICATIONS

MFP / MODEL NUMBER	MB460	MB470	MB480
	N22131B	N22132B	N22133B

	ITEM	SPECIFICATION
General		
	Dimensions MB460/MB470 MB480	 447 x 432 x 500mm (W x D x H) 447 x 432 x 529mm (W x D x H)
	Weight MB460 MB470 MB480	approximately: 17kg 18.5kg 19kg
	Power source	Input: 220 to 240VAC, 50 to 60Hz ± 2%
	Power consumption	Operating: 800W max. Normal operating: 500W Stand-by: 100W Power save mode: 10W max.
	Environmental: Noise (operating) (standby) Temperature Humidity	 56dBA 32dBA 10°C to 32°C 20% to 80% RH
Scanning		
	Image sensor	Colour CCD
	Light source	Cold Cathode Fluorescent Lamp (CCFL)
	ADF - Simplex	50 sheets (60 ~ 105 g/m^2)
	Optical resolution	Flatbed: 1200 x 600dpi ADF: 1200 X 300dpi
	Scanner life Flatbed ADF	 50,000 pages or 5 years 240,000 pages or 5 years.
	Scan area Flatbed ADF	 105mm x 148mm ~ 215.9mm x 296.9mm 105mm x 148mm ~ 215.9mm x 355.6mm
	Document size Flatbed ADF	 B5, A5, A4, Letter B5, A5, A4, Letter, Legal 13, Legal 13.5, Legal 14
	Document thickness Flatbed ADF	 11 mm 60 - 105 g/m^2

	ITEM	SPECIFICATION
	File Format Scan to Email/Server Actkey	 PDF, TIFF, JPEG PDF, TIFF, JPEG, BMP, PCX, GIF, TGA, PNG, WMF, EMF, Multi-PDF, Multi-TIFF
	Driver	TWAIN, WIA
	Paper feed	ADF: Face up
Copy Specification		
	Speed	ADF: 21 cpm (copies per minute), A4, 300dpi 22 cpm, Letter, 300dpi
	Number of copies	Up to 99
	Resolution	Scan: 600 x 600dpi, 300 x 300dpi Print: 600 x 600dpi
	Paper size Flatbed ADF	 B5, A5, A4, Letter B5, A5, A4, Letter, Legal 13, Legal 13.5, Legal 14
	Density	7 levels
	Copy Mode	Mixed, Photo: 300dpi Scan/ 600dpi Print Hires. Mixed, Hires. Photo: 600dpi Scan/ 600dpi Print
	Input tray	Tray 1/MP Tray/Tray 2 (optional)
	Edge erase	Top, Bottom, Left, Right Edge: 0 ~ 1in
	Margin shift	Bottom, Right direction: 0 ~ 1in
	Paper saving (N-in-1)	2-up, 4-up
	Collate	64MB standard memory: 25 pages A4 (ITU-T#1) 320MB optional memory: 50 pages A4 (ITU-T#1)

	ITEM	SPECIFICATION
Network Specification		
	Connectivity	Ethernet 100Base-TX/10Base-T auto-negotiation with RJ-45 connector
	Network protocol	TCP/IP: Network layer - ARP, IPv4/v6, ICMPv4/v6 Transport layer - TCP, UDP Application layer - LPR, FTP, TELNET, HTTP (except IPP), IPP, DHCP/BOOTP, SMTP, WINS, SNMPv1/v3, DNS, DDNS, UPnP, Bonjour, POP3, SNTP, WSDPrint, Kerberos NetBEUI: SMB, NetBIOS, CIFS, WINS Netware: Remote printer mode (max. 8 print servers) Print server mode (max. 8 file server, 32 queues) Encrypted password support (in print server mode) NetWare6J/5J/4.1J (NDS, boundary) SNMP ETHERTALK: ELAP, AARP, DDP, AEP, NBP, ZIP, RTMP, ATP, PAP IEEE802.1X IEEE802.1X: EAP-TLS, PEAP
	Supported browsers	Microsoft IE 5.5 or higher Netscape Navigator 6.0 or higher
	Configuration requirement	IP address Subnet mask Gateway SMTP server/POP3 server FTP server Web server
Fax Specification (MB470/MB480)		
	Circuits	PSTN, PBX line
	Compatibility	ITU-T G3/Super G3
	Transmission speed	3sec per page
	Line interface	Dual RJ-11C (Line and TEL)
	Compression method	MH, MR, MMR
	Resolution: Standard Fine Photo Extra fine	 200 x 100dpi 200 x 200dpi 200 x 200dpi 200 x 400dpi
	Speed dials	100 (max. 32 digits each location)
	Group dial	max 10 groups
	Auto redial	Yes
	One touch dial	5 x 2 location (with shift key)
	Sender ID	Yes (max. 32 characters)
	Transmission:	
	Broadcast	Yes (max. 100 transmissions)

	ITEM	SPECIFICATION
	Delayed	Yes (up to 5 transmissions; up to one month from current date/time)
	Receive:	
	Memory	Yes, receives even when printer error or paper out situation occurs
	Remote	Yes
E-mail Specification		
	Communication protocol	SMTP, MIME, POP3
	File formats	PDF, M-TIFF, JPEG
	Default file format	PDF
	Resolution	100, 150, 200, 300dpi (400, 600dpi 1 bit mono only)
	Default resolution B/W Grey/Colour	 200dpi 150dpi
	Address book volume: Max. e-mail addresses Group	 100 20
	Multi “Subject” registration	Yes, 5 kinds of “Subject”
	Job Build Scanning	Yes
	Separation limit	1MB, 3MB, 5MB, 10MB, 30MB, No limit
	Mail server authentication	SMTP-Auth, POP3
	Supported mail server application	Lotus Mail Server 5.0 MS Exchange Server 2000 RedHat 7.0 SendMail
	Supported LDAP server	Windows 2003 Active Directory Windows 2000 Active Directory Windows NT 4.0 + MS Exchange 5.5 Lotus Notes R5
	Supported mail application	Microsoft Outlook 2000 Microsoft Outlook Express 5.0 Microsoft Outlook Express 6.0 Netscape Messenger 4.7 Netscape Messenger 4.73 Eudora 4.3.2J Lotus Notes R5 Apple Mail

	ITEM	SPECIFICATION
Filing Specification		
	Communication protocol	FTP, CIFS
	File formats:	PDF, M-TIFF, JPEG
	Default file format	PDF
	Resolution	100, 150, 200, 300dpi (400, 600dpi 1 bit mono only)
	Default resolution B/W Grey/Colour	 200dpi 150dpi
	Max. number of File server settings	20
	Job Build Scanning	Yes
Printing		
	Speed	Letter: 30ppm A4: 28ppm
	Resolution MB460 MB470/MB480	 600 x 600dpi, 1200 x 600dpi, 2400 x 600dpi (half speed) Optical: 600dpi 1200 x 1200dpi, 600 x 600dpi Optical: 1200dpi
	Memory	64MB standard, upgradeable to 320MB max.
	Paper capacity at 75g/m² Main tray Multi purpose tray Optional 2nd tray	 MB460/MB470: 250 sheets MB480: 530 sheets MB460: Manual single sheet feed MB470/MB480: 50 sheets 530 sheets
	Paper weight	60 ~ 120g/m² in main tray 60 ~ 163g/m² in multi purpose tray 60 ~ 120g/m² in optional 2nd tray 60 ~ 105g/m² duplex print
	Paper output	150 sheets in face down (top) stacker @ <75g/m²
	Printer life	200,000 pages or 5 years
	Duty cycle	MB460, MB470: 50,000 pages per month max. MB480: 70,000 pages per month max.
	Toner life	**Starter:** 1500 pages Replacement: MB460: 3500 pages, 7000 pages MB470: 3500 pages, 7000 pages MB480: 3500 pages, 7000 pages, 12000 pages
	Image drum life	20,000 pages at 3 pages per job (simplex)

This product is not intended for use in the immediate visual field on the display work place.

To avoid disturbing reflections on the display work place this product shall not be placed in the immediate field of vision.

APPENDIX A - MOVING AND TRANSPORTING

MOVING YOUR MFP

NOTE
Lock the scanner before moving the MFP.

1. Turn off the MFP and disconnect or remove the following:
   - > Power cord
   - > Printer cable
   - > Paper in the paper cassette
2. Move the MFP to the new location.

WARNING!

This product is heavy; a minimum of two people are required to lift it safely.

NOTE
Be sure to unlock the scanner before turning on the MFP.

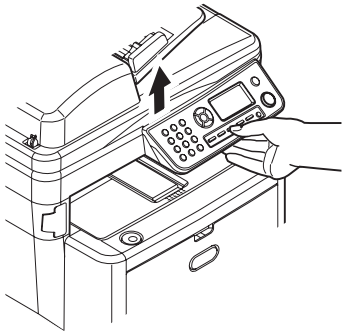
TRANSPORTING YOUR MFP

WARNING!

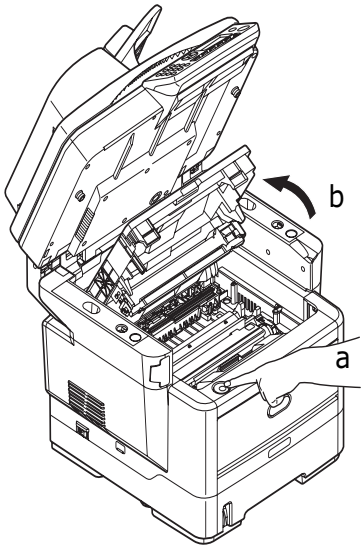
Your MFP is a precision machine and can be damaged during transportation if packaged incorrectly.

NOTE
- > *If your machine is equipped with the additional paper tray remove it before transporting.*
- > *Lock the scanner before transporting the MFP.*

1. Turn off the MFP and disconnect or remove the following:
   - > Power cord
   - > Printer cable
   - > Paper in the paper cassette
2. Lift the scanner.



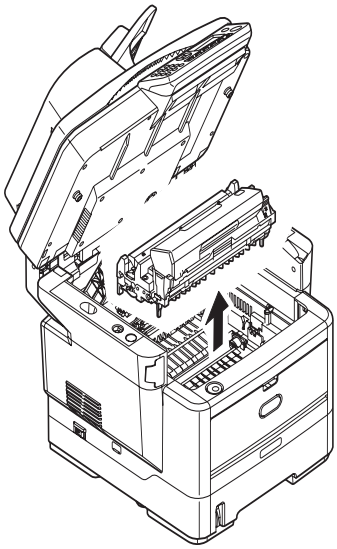
3. Press the cover release (a) and open the top cover (b) fully.



WARNING!

If the MFP has been powered on, the fuser will be hot. This area is clearly labelled. Do not touch.

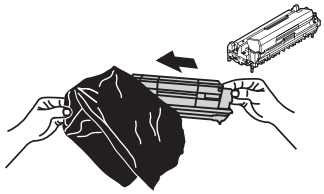
4. Lift the image drum along with the toner cartridge out of the MFP and place it on a flat table.



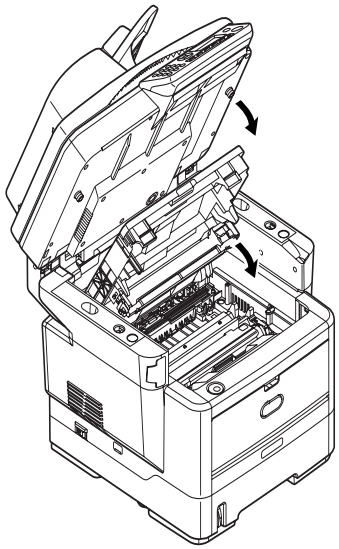
CAUTION!

The green image drum surface at the base of each cartridge is very delicate and light sensitive. Do not touch it and do not expose it to normal room light for more than 5 minutes. Never expose the drum to direct sunlight or very bright room lighting.

5. Place the drum and cartridge in a black bag plastic bag.



6. Re-install the image drum along with the toner cartridge back into the MFP.
7. Close the top cover and press down firmly so that the cover latches closed.
8. Gently lower the scanner.



9. Protect the MFP with cushion pads and put it in a box.

NOTE
It is recommended that you use the original box and packaging if available.

WARNING!

This product is heavy; a minimum of two people are required to lift it safely.

NOTE
Be sure to unlock the scanner before turning on the MFP.

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